

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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LONDON, SATURDAY, AUGUST 7, 1875.

[SUPPLEMENT.] {PRICE SIXPENCE.
PER ANNUM, BY POST, £1 4s.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
Established 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Miscellaneous, Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, and Dock Shares.

BUSINESS negotiated in Stocks and Shares not having a general market value. BUSINESS in all COLLIERIES and IRON Shares, and in the principal WAGON and MANUFACTURING COMPANIES OF THE NORTH OF ENGLAND AND SCOTLAND.

Mr. J. H. CROFTS, having now established CORRESPONDING AGENCIES in all the CHIEF TOWNS of the United Kingdom, is prepared to deal in the various LOCAL Stocks and Shares at close market prices.

COTTON SPINNING SHARES bought and sold, including those of Oldham, Bury, Heywood, Darwen, Accrington, and neighbouring districts. This description of security can be purchased to pay the investor very fair interest upon outlay.

Accounts opened for the Fortnightly Settlement.

Monthly and Daily Price Lists issued.

Bankers: City Bank, London; South Cornwall Bank, St. Austell.

SPECIAL DEALINGS in the following, or part:—30 Asheton; 10 Bilson, £10 (ex div.); 25 Chapel House; 15 Cardiff and Swansea, £3 10s.; 15 East Caradon, £7s. 6d.; 10 Great Laxey, £14 10s.; 100 Frontino; 50 Gold; 50 Gold Run, £7s. 6d.; 90 Javali, 10s.; 20 Ladywell, £3 1s. 3d.; 30 Last Chance, £2s. 6d.; 40 Lawe's Chemist, £6s. 6d.; 25 Marke Valley, £6s. 6d.; 50 North Prince Patrick, 10s.; 25 New Rosewarne, 13s.; 100 Penryn, £1 12s. 6d.; 80 Penryn, £1 12s. 6d.; 25 Parys Mountain, 13s.; 50 Positive Assurance, 13s.; 80 Penryn, £1 12s. 6d.; 25 Plynlimmon, 8s. 6d.; 25 Rookhope, 3s. 3d.; 5 Roman Gravel, £11 17s. 6d.; 10 Richmond; 50 St. Patrick; 50 Thorp's Gawber, £10 10s.; 15 Van Consoles, £2 3s. 9d.

* * Shares sold for forward delivery (one or two months) on deposit of 20 per cent.

Business on hand in all the leading TIN, COPPER, and LEAD Shares.

PATELEY BRIDGE LEAD AND SMELTING.—Special Business in these Shares. The mines are situated in the celebrated Grassington district.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER,
44, THREADNEEDLE STREET, LONDON, E.C.

Transacts business in MINING and COLLIERIES Shares of every description. English and Foreign Stocks, Colonial Government Bonds, Railways, Banks, and Miscellaneous Shares, and all Securities dealt in on the London Stock Exchange, for INVESTMENT or SPECULATION.

Purchases and Sales negotiated in Unmarketable Stocks and Shares.

Speculative Accounts opened for the Fortnightly Settlement.

References given and required when necessary.

A Stock and Share List forwarded to bona fide Investors free on application.

Bankers: The National Provincial Bank of England, E.C.

W. H. B. has SPECIAL BUSINESS in the undermentioned:—

100 Almada; 20 Eberhardt, £23½; 75 Port Phillip, 16s.

30 Asheton, 27s.; 30 East Caradon, 22s.; 150 Rookhope, 4s.

50 Bog, 10s. 6d.; 50 East Van; 15 Roman Gravel, £12½.

10 Blue Tent, 40s.; 25 Flatey, £1 11s. 6d.; 10 Richmond, £13½.

25 Birdseye, 35s. 6d.; 75 Frontino; 20 South Condurrow.

15 Bilson and Crump; 120 Gold (Wales), 4s. 6d.; 15 Sweetland, £23½.

100 Chontales, 12s. 9d.; 50 Javali, 11s.; 100 St. Patrick, £13½.

5 Cape Copper; 25 Ladywell, £23½; 100 Tankerville, £12½.

20 Chango (Silver), £4½; 60 Last Chance, 24s.; 100 Tecoma, 13s. 6d.

50 Chapel House Coll.; 20 Marke Valley, £23½; 5 Van, £24 10s.

50 Cathedral, 25s. 6d.; 50 Melindur Valley; 25 Van Consoles, £23½.

25 Cardiff and Swansea; 100 Malabar, 12s.; 20 W. Kitty (St. Ag.), 38s.

70 Carr Creek, 16s. 6d.; 100 Malpas, 12s. 9d.; 40 W. Tankerville.

2 Carr Brea; 100 New Consoles; 100 W. Russell, 18s. 6d.

50 Don Pedro, 13s.; 40 New Quebrada; 5 West Chiverton.

25 Devon Con., £2 19s. 6d.; 20 Pateley Bridge (Lead); 10 W. Grenville.

10 East Lovell; 50 Parys Mount, 12s. 9d.; 50 Wheel Peavor.

40 Emma (Silver), 36s.; 100 Penryn, 10s. 6d.; 70 Yorke Peninsula.

20 Pennerley, 33s.

Bankers: London and Westminster, and City Bank.

Clients giving the usual "cover" can open accounts for the fortnightly settlement. Coupons collected and drafts cashed free of charge. References given when necessary in most of the leading towns of the United Kingdom. Commission on Railways 5s. per cent.

SPECIAL BUSINESS in Glaisdale Quarry, Alltaml Colliery, Eberhardt, Cape Copper, Cardiff, Chapel House, Pateley Bridge Lead. Particulars may be had of this rising company.

JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
77, CORNHILL, LONDON.

Turkish Six Per Cents. of 1854, 1855, 1856, 1857, and 1873 specially recommended; also Wheel Grenville, Treigh Wood, Parys Mountain, Wheel Peavor, and Crebor shares.

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G. E. SIMPSON, STOCK AND SHARE DEALER,
6, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C., will

SELL the following SHARES, free of commission:—

40 Almada, 15s.; 50 Hington, £13½; 20 Richmond, £13.

50 Australian, 22s.; 70 Javali, 11s.; 40 Sweetland, £23½.

70 Bog, 9s.; 50 Ladywell, £23½; 70 St. Patrick, £1 2s. 6d.

70 Birdseye, £1 13s. 9d.; 40 Marke Valley, 37s. 6d.; 15 Tankerville, £12½.

20 Cardiff and Swansea; 50 Monydd Gorrdu, £23½; 5 Van, £25.

70 Chontales, 12s. 6d.; 40 Pateley Bridge, £23½; 50 Van Consoles, £23½.

20 Devon Con., £2 18s. 9d.; 30 Parys Mount, 12s. 6d.; 5 W. Chiverton, £17.

20 Eberhardt, £23½; 50 Pennerley, £1 11s. 3d.; 10 W. Tankerville, £13 9d.

40 East Van, 30s.; 70 Penryn, 9s. 9d.; 10 W. Crebor, £2 6s. 3d.

35 Frontino, £1 3s. 9d.; 15 Roman Gravel, £11 18s.

Special Business in Chapel House, either as Buyer or Seller.

JOHN MOSS AND CO., STOCK AND SHARE DEALERS,
224 AND 225, GRESHAM HOUSE, OLD BROAD STREET, E.C.

Transact Business in all descriptions of British and Foreign Stocks and Mining Shares, either for cash or on account. Speculative accounts for the fortnightly settlement opened on special and advantageous terms.

J. M. and Co. advise respecting the Sale and Purchase of all classes of Security, and Investors should communicate with them before buying.

J. M. and Co. have great pleasure in pointing their clients to the steady and continuous improvement made in the North Prince Patrick Mine, which is evident from the reports published weekly in the columns of this Journal. From this point the shares may be expected to have as great a rise as the South Prince Patrick. J. M. and Co. are always able to deal in these shares.

Bankers: The London and County Bank, Lombard-street.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS,
85, GRACECHURCH STREET, LONDON, E.C.

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MR. GEORGE BUDGE, STOCK AND SHARE DEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established

25 years) has SPECIAL BUSINESS in—50 North Pool; 25 Alltaml, £5; 50 Chapel Ordinary, £12; 50 Old Treburgett, 4s. 9d.; 1 Nant-y-Glo and Blaifa

100 New Quebrada; 200 Gold Run, 17s.; 25 Richmond; 50 Almada, 15s. 9d.; 40 Plynlimmon, 7s. 9d.; 25 Western Andes, £2 2s. 6d.; 75 Javali, 8s. 3d.; 50 Frontino

34s. 6d.; 25 New Rosewarne, 9s. 9d.; 25 East Caradon, 17s.; 35 Birdseye, 34s. 6d.; 100 Prince of Wales, 6s.; 50 L.L.L.; 150 Exchequer, 7s.; 120 Mammoth Copperopolis; 100 Chontales, 12s. 3d.; 50 St. Patrick.

SPECIAL BUSINESS in Chapel House Colliery. A FEW SHARES FOR

SALE at lowest price.

INVESTMENTS IN STOCKS AND SHARES.—

BRITISH AND FOREIGN STOCKS AND SHARES BOUGHT AND SOLD.

List of Prices and other information sent on application.

Bankers: The Alliance Bank (Limited), London.

MR. P. WATSON, 79, OLD BROAD STREET, LONDON, E.C.

(Close to Stock Exchange.)

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MR. ALFRED E. COOKE, STOCK AND SHARE DEALER,
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10 Bilbae Iron Ore; 25 Llanrwst Lead; 5 Swedish Iron Rolling

30 Cathedral, 27s.; 10 Mostyn Coal; 20 Stock.

15 Cedar Creek, 20s.; 15 Monydd Gorrdu, £23½; 25 Thorp's Gawber, £10½

20 Chapel House, £23½; 80 Old Treburgett, 4s. 3d.; 15 W. Tankerville, 22s. 6d.

45 Glaisdale, 20s.; 25 Pateley Bridge; 20 Wheel Crebor.

100 Javali, 10s.; 25 Plynlimmon, 7s. 3d.; 30 West Chiverton.

20 Saint Patrick, 22s. 6d.

Shares having no quotations affixed may be had at lowest market prices.

Business transacted in nearly all Coal, Iron, Manufacturing, and Miscellaneous Shares.

Reports and full information forwarded on any mining property.

On payment of 20 per cent. deposit shares may be had for end of September account.

MR. T. E. W. THOMAS, SWORN SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.

Established 1857.

The following are the latest prices at which business could be done. Where the

difference between the buying and selling price is wide transactions may be

effected at an intermediate price:—

Birdseye Creek, £1 1½; 9s. 1½; Penryn, 10s. 6d.; 8s. 6d.

Bog, 35; 37½; Port Phillip, 13s. 9d.; 15s.

Carn Brea, 10s.; 12s.; Prince of Wales, 2s. 4s.

Chontales, 2½; 2%; Richmond, £12½; £13½

Devon Great Consols, 40; 49; Roman Gravel, 11½; 12½

Dolcoath, 12s.; 14s.; St. Patrick, 1; 1½

Don Pedro, 8; 8½; South Caradon, 13½; 15½

Eberhardt, 11½; 12½; 80 Roman Gravel, 4½; 4¾

East Caradon, 11½; 12½; Sweetland Creek, 3; 3½

East Van, 1½; 1½; Tankerville, 11½; 12½

Flagstaff, 13½; 15½; Tincroft, 18; 20

Gawton, 10s.; 12s.; Van, 24; 25

Hington Down, 1; 1½; Van Consoles, 2; 2½

Javali, 10s.; 12s.; West Chiverton, 16½; 16¾

Ladywell, 3½; 3½; West Tankerville, 1; 1½

Marke Valley, 13½; 2; Wheel Crebor, 2; 2½

New Quebrada, 7s.; 8s.; Wheel Jane, 2½; 3

New Rosario, 7s.; 8s.; Wh. Kitty (St. Agnes), 2½; 3

Parys Mountain, 11s.; 13s.; Wheel Uny, 1½; 2

Pennerley, 13½; 15½

Bankers: London and Westminster, and City Bank.

MR. W. L. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET, LONDON, E.C. (Established 19 Years)

can sell the following SHARES, at prices annexed:—

20 Alltaml Colliery; 30 Gunnislake (Clit.), 31s. 3

30 Asheton, 26s.; 50 Glaisdale, 20s.; 50 Penryn, 10s. 6d.

20 Bedford Unit, 10s.; 60 Gold, 4s.; 10 Pateley Bridge, 47.

25 Birdseye, £1 14s.; 40 Javali, 10s. 6d.; 40 Rookhope, 2s. 9d.

15 Bilson & Crump, £10½; 20 Ladywell, £23½; 40 St. Patrick, 22s. 6d.

20 Chapel House, £23½; 25 Malabar, 11s.; 5 W. Chiverton, £16½.

40 Cathedral, 26s.; 20 Marke Valley, 39s.; 20 Wheel Crebor, £23½.

20 Colorado, £23½; 25 Monydd Gorrdu, £23½; 100 West Milver, 6s. 9d.

25 Devon Con., £2 17s.; 20 New Quebrada, £4 2s.; 10 W. Godolphin, 24s.

40 Don Pedro, 13s. 9d.; 70 Port Phillip, £3½; 10 W. Tankerville, 22s. 6d.

50 Emma, £1 16s.; 25 Pennerley, £1 13s. 9d.; 60 West Maria, 5s.

20 Eberhardt, £23 8s. 9d.; 20 Porthead Waterworks; 40 Van Consoles, 42s. 6d.

60 Flagstaff, 30s.; 80 Plynlimmon, 7s. 6d.; 20 Hington, 25s.

Bankers: London and County Bank.

Messrs. H. and Co. wish to direct attention to the DIVIDENDS declared by

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shares in these companies at market rates.

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Telegraph, Insurance, Gas, and Miscellaneous Shares having no regular quotation.

Accounts opened for the fortnightly settlement, and shares sold for forward

delivery on receipt of cover.

SPECIAL BUSINESS in the following British and Foreign Mines, Colliery,

and other Shares:—

40 Alamillos, 38s. 9d.; 55 Great W. Van, 8s. 9d.; 75 Richmond, £12½.

15 Birdseye, 35s.; 30 Grogwinion; 170 Rica, 4s. 9d.

25 Bilson and Crump; 50 Gawton, 12s. 6d.; 75 Rookhope, 3s. 9d.

75 Bog, 9s.; 20 Hornachos; 80 Sweetland, £3 1s. 3d.

45 Clec Hill, 4s. 6d.; 15 Hudson's Bay; 80 Aurora, 10s.

30 Cathedral, 26s. 6d.; 85 Javali, 10s.; 25 So. Carn Brea, 38s. 9d.

30 Cedar Creek, 16s. 9d.; 85 Last Chance, £23½; 45 So. Roman Gravel.

25 Chicago, £4½; 40 Ladywell, £23½; 40 St. Patrick, 22s.

75 Chontales, 12s. 6d.; 50 Malabar, 11s. 9d.; 80 Thorp's Gaw., £10½.

60 Chapel House; 30 Marke Valley; 15 Tankerville, £11½.

25 Cardiff & Swan, £23½; 30 Native Guano; 10 Tincroft, £19½.

40 Colorado, £2 16s.; 60 New Quebrada; 40 Van Consoles, 41s. 6d.

20 Cook's Kitchen, £23½; 100 New Rosario, 7s. 6d.; 5 Van, £25.

75 Don Pedro, 13s.; 60 Old Treburgett, 4s. 9d.; 50 West Jewell, off. wtd.

20 Devon Con., £2 18s. 9d.; 40 Pateley Bridge; 10 West Chiverton, £16½.

40 East Van; 55 Penryn, 9s. 9d.; 50 West Maria, 5s. 3d.

35 Emma, 36s. 6d.; 60 Pennerley, 35s.; 30 Western Andes.

20 Eberhardt, £23 8s. 9d.; 60 Port Phillip, 13s. 9d.; 10 Wheel Kitty.

60 Frontino; 50 Plynlimmon, 7s.; 40 W. Tankerville, 15s. 6d.

135 Gold; 70 Parys Mountain, 12s. 6d.; 10 Wheel Jane.

70 Gold Run, 17s. 3d.; 90 Prince of Wales; 20 Wheel Grenville.

10 Great Laxey; 50 Rio Tinto, £7 6s. 3d.; 20 Wheel Uny, 42s. 6d.

MR. CHARLES THOMAS,

MINING AGENT, STOCK AND SHARE DEALER,

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The Report for 1874, copies of which with the statements of account can be obtained on application, shows that a sum equal to 40 per cent. of the premium income was added to the funds, while the general income was increased. 549 policies, averaging £535 each, were issued.
The directors continue to make advances to assureds in the office on liberal terms.

H. D. DAVENPORT, Secretary.

VISITS TO THE MANCHESTER EXHIBITIONS—No. IV.

In our last notice on the Manchester Exhibition of Appliances for the Economy of Labour we finished describing the various exhibits which were of special interest to the mining profession in general. Before, however, proceeding to the other Manchester Exhibition we may first offer a few remarks on a coal-ash washing machine exhibited at Cheetham Hill, and constructed by the German Humboldt Engine Works Company (formerly Sievers and Co.), of Kalk, near Deutz, on the Rhine. As the name implies, its object is to wash coal-ashes, and to sift the latter. We need hardly remind the steam user that with our present incomplete furnace combustion most ashes contain more than 50 per cent., and many fully 70 per cent., of good coke and other utilisable refuse which at the present day are allowed to waste; for instance, such cinders can be used up over again in iron and other works, or for house fires, whereas the hard substances found to be contained in the ashes when ground and mixed with other substances make excellent bricks, and can be used in mending roads and streets; or, to quote one further application, the fine refuse ashes can all be made into mortar and cement. Without considering the possibility of the exhaustion of our coal fields, still there can be no doubt that economy of fuel is much to be desired, and ought to be much more extensively practised than it is at the present day. The above remarks will readily show that the object of this coal-ash washing machine is good. The action of the latter is as follows:—The ashes are lifted to the top of the machine by an elevator working an ordinary bucket-chain. The buckets emptying themselves at the top allow the ashes to drop into an inclined screening drum, which is perforated in different sizes on its surface, much after the same manner as the screens are in the well-known Blake's machine; the inclination of this drum causes the ashes to travel to the lowest end, and they thus become sorted according to size by falling through the before-mentioned perforation. The largest portions of unburnt coal and clinker fall out at the end of the drum on to the ground, and have to be separated by hand from each other. The droppings through the perforations fall, however, into an ash-washing apparatus, which is kept full of water by a pump actuated by the machine itself. The washing-tub, as it may be called, is fitted with a bottom sieve which receives the droppings, and an up and down motion is imparted to the sieve by the machine. This movement continually forces the water through the falling sieve, causing those articles of lighter specific gravity to work themselves to the top of the droppings, and a few outlets fitted on the sides of the washing-tub carry the top particles into baskets so placed as to receive the outflow. This is a general description of the machine's working action, and although we learn from the Humboldt Engine Works Company that the cost of extracting is only 6d. per ton, with a corresponding selling price of the produce at their works of approximately 3d. per cwt., still the machine in question absorbs a deal of driving power, which amounts (provided we are correctly informed) to above 5-horse power. We have already referred to one German firm which is trying to introduce their machinery on British soil at this Exhibition, and although less objection may be taken to the design of the former than to that of the latter, yet these exhibits show that not only in beauty of finish, but also in the mechanical design of their machinery, the Germans are far behind us. In fact, we venture to state that not even our worst engineering shop would have allowed a more clumsy designed machine to leave their yard than may be seen by this coal-ash washing-machine. Let those who have the chance examine this machine minutely, especially the crank supports and the pump connecting-rods, and they will find our statements verified to the fullest extent. We doubt our continental friends will not forget to attach great importance to the fact that they are exhibiting German machinery in the very heart of English mechanical ingenuity, and although we are quite willing to welcome them even there, still, as they have chosen to enter the competing ring, we are called upon to judge their machinery just in the same spirit as we should discuss English skill. If, then, our criticism of this German machine has not been as favourable as it might have been, we have pointed out to the exhibitors the direction in which the machine in question may be greatly improved, and this without partiality.

Coming to the Manchester Mechanical and Industrial Exhibition of the Royal Pomona Palace, we find here a much greater space reserved for the display of machinery in motion than might be seen at the other Exhibition. Unquestionably, however, the motive the Society for the Promotion of Scientific Industry had in getting up their Exhibition had been far nobler than the chief object of the Exhibition we are now about to describe, for the former conceived the fundamental idea more of educating the mass, while the latter is without doubt a commercial speculation from beginning to end. Pomona has been the Manchester Cremorne, and with this we have said all that can be argued in its favour as far as its past history is concerned. Its original purpose was consequently one of public entertainment, at a chief entrance fee, and with this facility offered it can be easily understood that the habitual frequenters of this dancing saloon (?) were not of the most *recherché* class of people. Much has, however, been altered, and it would be a serious injustice to its energetic proprietor to say that the present exhibition of machinery there displayed was not of a respectable character; on the contrary, we have not the slightest hesitation in saying that the exhibition of machinery has been placed under the auspices of a most *élite* patronage, and that amongst its supporters a great number of important English machinists are found ranked side by side amongst the exhibits. Spacious sheds have been set apart from the dancing hall, and erected partly for the purpose of holding periodical exhibitions of machinery or animals (cattle, &c.), and partly for the carrying on of the proprietor's private business. Its President is the Lord-Lieutenant of the county, the Right Hon. the Earl of Sefton, and its directing engineer is Mr. W. W. Hulze, M.I.C.E., M.I.M.E. To render the distinction all the more conspicuous between the dancing hall and the newly-erected structures the latter has been termed the Agricultural Hall, and to render it more suitable for the exhibition of machinery in motion the floor of this part has been boarded. Three main shafts drive the whole of the machinery, and the motive power is supplied from one of the bays, by means of two regular working double-flued Galloway boilers, belonging to Mr. Reilly, the proprietor. These boilers, which are of the ordinary type, have nothing specially worthy of notice, excepting it be that the two flues of one of these boilers is fitted with Rye's patent self-acting firing machine, or mechanical stoker. In the old hopper two fans were used to one fireplace, but with two-flued boilers this could

not be accomplished, and one fan only threw the coals on one side of the fire. To obviate this with one fan, the makers (Messrs. Woolstenhulmes, Rye, and Co., of Oldham) reverse the motion at intervals, firing right and left alternately, and partially burning the smoke. The fan of this apparatus is kept constantly running, while the feeding part is regulated by a steam-gauge, the steam peg not varying above $\frac{1}{2}$ in. the day through. The same regulation closes the damper when the steam is too high. Although the boiler in question has likewise a self-adjusting feed arrangement worked in connection with these hoppers, and by which it is claimed any desired steam pressure may be retained in the boiler, which is done by its actuating the feed according to the steam pressure in the boiler, still it is running idle, and may possibly not have been found to have answered its purpose.

In the same bay with these boilers we find a Howard safety-boiler of 36 pipes and of 55-horse power. This type, as the engineering public is aware, has been introduced in various forms since 1866, but the Barrow Shipbuilding Company claim to have made several improvements on the old construction, which we shall not here repeat, since a paper relating to these improvements was recently read at the annual meeting of the Iron and Steel Institute on May 7 last. We were alluding in our last report to the ignorance that even prevailed amongst engineers on the question of the generating of steam, and as the opportunity is now afforded us of giving a practical illustration of some of the various opinions on this subject we mention the following:—Amongst boiler makers or engine machinists it has now become a custom to circulate facts about steam-boilers, or to give useful (?) information on steam-power. We may, consequently, assume these pamphlets, &c., to be written by fully competent practical men, but notice the diversity of opinion often met with in these pamphlets. You will read in the one that the only reliable way of testing the economical working of a boiler is by weighing the fuel, whereas another pamphlet very properly observes—"coal varies so much in quality that the consumption of a certain weight per horsepower is not sufficient to show the economical results." Or again, you may find on one such circular—"10 lbs. of water evaporated per hour with 1 lb. of coal is exceptionally good work," whereas another such circular will maintain that "the best steam coal is capable of generating sufficient heat to evaporate 15 lbs. of water per 1 lb. properly burnt." The looseness of these statements is self-apparent to every thinking mind, for there is a certain vagueness about the word coal, as it is only by previously determining the chemical composition of the fuel employed that we are enabled to judge of the relative heating value of the coal as compared with that of standard quality. When we consider that the theoretical investigation of Favre Silbermann on the heating qualities of coal have conclusively proved that the combustion of each pound of coal per hour liberates heat enough to develop about 5-horse power, where can we talk now of exceptionally good work being done by our present types of boilers? Evidently these pamphlets are got up either with great ignorance of all their authors' surroundings, or for the purpose of throwing dust into people's eyes to force sales. Be this as it may, we have no time to reveal further discrepancies in these pamphlets. Suffice it to add that we quite agree that when it is remembered upon how many contingencies the security of steam-boilers depends, and, in many cases, how narrow the margin of safety is, the wonder is not that disastrous explosions are frequent, but rather that their number is not indefinitely increased. The system of careful inspection by "boiler insurance companies" has been attended with some good results, yet in spite of the strenuous efforts being made by the promoters of those companies to enforce such inspection by law, few precautionary measures will be found sufficient to ensure perfect safety either in the purchase or working of steam-boilers. Amongst other boiler exhibitors at this Exhibition we may mention the names of the Manchester Sectional Boiler Company and Crosland's Boiler, both of which have now been sufficiently long before the public to render them well known. Passing out of the boiler room, Schiele's fans are here first arranged and shown, as constructed in the latest patent. The general description and arrangement of the common blowing fan applies also to the "Excelsior" compound exhausting fan, but the arrangement of parts is different. At each end of the fan—at its "in-take" or centres—a strong iron air chamber is placed, and furnished with flanges, which are intended to be joined up to pipes of tin, iron, or wood, so as to connect the fan with the place or places from which it is desired to draw. The two inlet boxes may either be joined into one, to exhaust from any given place, or may be used separately, and in different directions, &c. The construction of the air passages are specially made wide and free, so that all dust, fibre, dirt, &c., drawn in may be instantly discharged into the air chamber, which surrounds the vanes, and is carried away with the blast. By these means the makers claim to have removed all objections urged against the employment of fans, said to be due to their liability to choke and foul with heavy matters passing through them. These fans have been made to work under 400° to 500° of heat with the bearings kept perfectly cool, and can be used to blow as well as exhaust, and in some cases the two principles are used at the same time. Schiele's Excelsior noiseless blowing fan is also exhibited by the Union Engineering Company.

The next exhibit which we may notice is C. Henry Hall's patent pulsometer pump, with 9-in. diameter working cylinders, and occupying only 19 by 11-5 by 30 in. space, which is guaranteed to deliver 145 imperial gallons per minute. The machine is of American origin, and it is claimed to be peculiarly adapted to pumping water from mines, owing to the entire absence of internal mechanical parts, securing it from liability to stoppages, or the breaking of machinery, and so preventing wear and derangement of parts by grit, sand, and mud possibly contained in the water. As already stated, the principal characteristic difference which distinguishes this invention from the piston-pump is the total absence of mechanical elements, and a substitution thereof of purely functional conditions, arranged in harmony with the simplest form of apparatus, so utilising merely the principles of hydro-dynamics. In this pump the steam pressure is brought to bear directly upon the liquid as the forcing element, while the subsequent condensation of the same furnishes the lifting force, whereby the alternate vacuum and pressure within a pair of suitably arranged chambers produces a continuous stream. We hope shortly to bring illustration of this pulsometer pump before the notice of our readers, with a more detailed description of its working action, so that we shall now merely add that these pumps are made up to sizes occupying 74 by 46 by 120 in., and delivering 3250 gallons per minute. They are also adapted to irrigating lands, draining swamps, filling tanks at railroad stations, likewise for paper-mill use, as they will pump pulp as readily as

water, or for other factories, tan-yards, oilworks, wrecking or bilging vessels, and for waterworks, &c.

Korting Brothers likewise exhibit the same class of machinery as at Cheetham Hill, which we may pass over, since we have already described these specialities.

Baker's patent rotary blower is exhibited by the Savile-street Foundry and Engineering Company, and will be duly illustrated by us in one of our future numbers. In drawing attention to this new patent pressure blower, the makers state that in a pressure blower in which the air is forced forward by a revolving vane or piston, the whole of the power applied (except the very slight amount absorbed by the moving parts of the machine) is utilised in producing pressure, and should the outlet from the blower be throttled, the pressure of the blast will continue to rise until the limit of the driving power is reached, when the machine must stop. With a fan, however, the case is widely different; it must be run at a high velocity, probably ten times that of a pressure blower, to impart sufficient momentum to air, a substance possessing only a very slight specific gravity; thus there is a very considerable loss of power from the friction of the bearings when run at such extreme speeds, as well as from the power absorbed in continually changing the direction of the belts, which take short turns round very small pulleys, and after all but a portion of the air thus acted on is really forced forward. Should the outlet from the fan be partially throttled there will only be a slight increase of pressure in the blast while the fan continues to run at the same speed, and if the outlet be entirely closed the fan will still continue running, expending the same power, but producing no practical effect.

Many pressure blowers have within the last few years been submitted to the public, the most successful of which has proved to be the one known as Root's blower, and which is a very excellent machine. Baker's pressure blower was tested in competition with the former by the Committee of the Franklin Institute Exhibition, Philadelphia, in October last year, and the silver medal and diploma were awarded to it by the committee on the ground of superior merit. In this trial the capacity of the two machines was taken from the respective printed circulars, the Root's blower being rated to deliver 134 cubic feet per revolution, while the Baker's blower discharged 12 cubic feet per revolution. In order to make both machines equal in discharging, through holes of equal size, the Root machine being run at 182 revolutions per minute, corresponded to 202 revolution per minute in the Baker blower. At this speed the latter indicated 19 ozs. to 21 ozs., with pulsations of 6 ozs. on the pressure-gauge, thus showing an average of 20 ozs. At the speed of 180 revolutions per minute Baker's machine indicated 18 ozs. very steady, the variations being not more than $\frac{1}{2}$ oz. in either direction, while the pulsation was about 5 ozs. With this last-mentioned speed Root's blower showed 17 ozs. pressure on the gauge, and at no time reached above 18 ozs., while sometimes falling as low as 15 ozs. The pulsation was so great as to cause the needle of the instrument to become invisible. Running the two machines by the same engine for ten minutes, the Root machine made 1500 revolutions, according to the counter, the power consumed being 8-43-horse power, and the blast pressure was on an average 11 $\frac{1}{2}$ ozs., standing at times at 12 ozs., and sometimes falling as low as 10 ozs., with an invisible needle caused by the rapidity of the pulsation. On the other hand, Baker's blower registered 1517 revolutions, with an average horse-power consumed of 8-13, while the pressure-gauge recorded 12 ozs. very steady, and the pulsation 5 ozs. From this data the comparative efficiency of the two machines may be seen at a glance to be in favour of the Baker pressure-blower.

The Baker's blower is not only adapted for supplying blast to cupolas and smiths' fires, but it is fitted to be used as a gas exhauster, or for Hargreave's chemical process; for moving hot gases, for which latter purpose it is only necessary to fit it with an arrangement of water bearing for keeping the revolving journals cool, at an extra cost, and which is on the whole but trifling. The blower is also said to be well adapted for the ventilation of mines and ships, and public buildings and tunnels, for the removal of dust from grinding-rooms, for blowing the furnaces of steam-ships, &c., &c. It will be well to remember that in laying down conducting-pipes from the blowers to cupolas or smiths' fires, sill piping or brick flues are never tight, even to the pressure of a fan; they should, therefore, never be used for either fan or blower. With the increased pressure of the blower the leakage of air, and consequently waste of power, will be much greater, and although the first cost of laying down light cast-iron socket-pipes may be higher than a brick or tile flue, the extra cost will be quickly repaid by the increasing efficiency of the blower, and saving of power in driving; in fact, to experience the full benefit that may be derived from the blower tight pipes are absolutely essential. The diameter of the blast-pipes should be so proportioned that the air delivered through the pipes does not travel at a higher velocity than 60 ft. per second. Experience has shown that for a cupola the size of pipes, as determined by the following rule, has given good results—viz., divide the area of the cupola in square inches at the melting point by ten, the square root of the quotient is the diameter of the blast-pipe, also in inches. If the pipes exceed 50 ft. in length the diameter should be increased somewhat to allow for the friction of the air in the pipes. As we again intend to refer to Baker's patent rotary blower and gas exhauster, we shall for the present postpone the description of the machine with its working action till then, and will now proceed to notice Horsfall's patent bolt forging machine, exhibited by Messrs. Greenwood and Batley, of the Albion Works, Leeds.

In this machine heads of any desired form may be put on bolts, screws, spikes, or rivets, such as square heads, with square, oblong, or round necks; hexagon heads, with round necks; cheese heads, with square or round necks; mushroom heads, with square, round, or oblong necks; and countersunk heads, with square or round necks. The working capacity of the machine per day is stated to be about 18 gross of bolts, with mushroom, countersunk, spike, or rivet heads, and about 12 gross of bolts with square, hexagon, or cheese heads. These classes of bolts are made from round iron, previously heated in a forge fire-place at the side of the forging machine. The heads are formed on the end of the bar, and the bolts cut to any required length in the machine at the same heat, thus causing the cost of forging to be the same for any length of bolt. The bolts made on the machine with square, hexagon, and cheese heads do not require any dressing or finishing by hand, but on mushroom or countersunk heads a slight film is left, which can be removed either in a spike or rivet trimming machine, or in a pair of dies in the bolt forging machine. The bar-iron, being heated to whiteness in the forge fire, is next placed suitably in the forging machine, when, by working a foot-treadle, the heated end becomes formed to the shape required by suitable dies playing upon it. A pair of dies, likewise acted upon by the forging machine, and fitted to it, may be then made up to cut the bolt at any length desired. Moreover, a breaker is applied to this machine to prevent undue strain being put on the working parts through the carelessness of the operator in placing the iron in the dies. By means of a self-acting stop-motion the machine can be stopped after each single revolution, or it can be kept in continuous motion, at the will of the attendant, at a speed of from 50 to 70 revolutions per minute, the latter speed being recommended for working with.

[To be continued.]

CONVERTING SCRAP IRON INTO STEEL.—The features of novelty in the invention of the Terre Noire La Vouite and Besseges Foundry Company, consists in converting old rails, axles, tyres, and such like materials into steel, metal having the property of steel, by melting down in a Siemens-Martin furnace a certain quantity of iron containing less than 1-1000th of phosphorus with a portion of the said old rails, axle tyres, and such like materials, and then throwing into the mass and during the running off fragments of ferro-manganese or ferro-silicon in such quantity that the melted metal shall contain 1 per cent. in weight of manganese, or $\frac{1}{2}$ per cent. of silicon.

HOLLOWAY'S PILLS AND OINTMENT.—When the tongue is red and raw, looking like a ripe strawberry, then there is great danger of the lining of the stomach and bowels being irritated and inflamed. Much caution should then be used in diet, which should be principally farinaceous and milk; the ointment must in such cases be assiduously rubbed into the pit of the stomach and surface of the bowels, and if any diarrhoea be present no solid food must be taken. In conjunction of the liver the tongue will be much coated, the pills should then be taken regularly till it assumes its natural aspect. These twin remedies will be found most valuable to all who suffer from any liver complaint.

THE GENERAL SHARE TRUST COMPANY (Limited) is authorised to offer for Subscription 500 Preference Shares of £10 each, upon which 12 per cent. will be paid before any Dividend is paid on the Ordinary Share Capital.

The Vendor has undertaken by his agreement to place the sum of £600 on deposit, to guarantee the punctual payment of the interest half-yearly for the first year.

THE SHARES WILL BE PAYABLE—
£1 on application, £2 on 1st October,
£5 on allotment, £2 on 1st November.

THE Newbridge Engine Colliery Company (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867, whereby the liability of each shareholder is limited to the amount of his shares.

CAPITAL £10,000, IN 1000 SHARES OF £10 EACH.

Of which 500 form the present issue of preference shares, and the remaining 500 the ordinary share capital of the company, upon which no dividend will be paid until after 12 per cent. has been paid on the preference shares, then 12 per cent. will be paid on the ordinary shares, and the balance divided *pro rata* on the whole of the shares; 200 only of the ordinary shares are now to be issued.

DIRECTORS.

S. G. HANSON, Esq., 7, St. Stephen's-square, W.
EDWARD HILTON, Esq., Director of the Hendreforgan Colliery Company (Limited).
A. SEYMOUR DOUGLAS, Esq., C.E., Director of Robert Beswick and Company (Limited).

BANKERS.

LONDON AND SOUTH WESTERN BANK (Limited), 7, Fenchurch-street, E.C.

SECRETARY—CHAS. BARLOW.

OFFICES,—19, QUEEN VICTORIA STREET, LONDON, E.C.

PROSPECTUS.

This colliery is situate in the Forest of Dean, in the county of Gloucester, at a distance of about eight miles from Ross and fifteen from Gloucester. The high road from Ross to Monmouth passes through the property, and the Forest of Dean Branch Railway, which is now in course of construction, intersects the property, and passes within 20 yards of the pits. When this is completed the colliery will be in direct communication with Hereford and Gloucester, and the whole of the South Wales Railways.

The property, which is 95 acres in extent, is held under an agreement for a lease to be granted for a term of 21 years, at a dead rent of £100 per annum, merging into the extremely moderate royalties of 7d. per ton on large coal, 5d. on small coal, and 6d. on ironstone. The galeage dead rent is £30 per annum.

There are two seams of coal leased—viz., the Coleford High Delf, 5 feet thick, of which about 25 acres have been worked, and the Upper Trenchard Delf, 2 feet thick, untouched, containing together an aggregate reserve of 700,000 tons.

These seams produce good house and steam coals, for both of which there is a good demand in the neighbourhood.

This colliery will be acquired by this company on most reasonable terms, with the intention of pumping out the water, which has accumulated during the time that it has been idle, putting the plant into thorough repair, and re-opening the workings.

There are three pits sunk on the property to the Coleford High Delf seam, at 70 yards from the surface, one pumping-engine, with two boilers, pumping gear, and lift, one winding-engine and boiler, pit frames, &c.

It is estimated that the colliery can be put into thorough repair, and made capable of producing an output of 60 tons a day, within six or eight months, which can be increased to 100 tons per day in from nine to twelve months.

The present selling price of the coal on the bank at the adjoining colliery is 14s. per ton for large coal, and 6s. per ton for small, while the cost of getting, including all expenses, will certainly not exceed 7s., which, supposing the proportion of small coal to large to be as much as one to one, will produce a net profit of 3s. per ton all round, equivalent, on an output of 100 tons per day for 250 days, to a profit of £3750 per annum, whereas 6d. per ton only would be more than sufficient to provide for the interest on the Preference Shares. Moreover, it must be remembered that this calculation is based on the lowest summer prices.

The chief advantages which these shares offer are a preferred dividend at the rate of 12 per cent. per annum, secured for the first year during the development of the colliery by the deposit of £600 in the names of two trustees, the reasonable terms upon which the property has been acquired, and the arrangement whereby the cost of management will be dependent on the profits.

Full Prospectuses and Forms of Application can be obtained from the Bankers, or from the Secretary, at the offices of the company.

THE BRITISH IRON TRADE, AND INDIAN RAILWAYS.

The Indian market has been a valuable one for the British iron trade, and it may possibly afford some help to it in the future. But it must be admitted that the experiment made by the Indian Treasury in guaranteeing interest upon the capital expended upon the arterial Indian lines has not thus far been attended with very encouraging results. The East Indian Railway, which is the most important member of the group of guaranteed lines, has certainly swung clear of the Government guarantee, and has proved self-supporting, and even more than self-supporting. But the three systems ranking next in importance—the Great Indian Peninsula, the Madras, and the Bombay, Baroda, and Central India—still impose serious annual charges upon the Indian exchequer. In the six months ending Dec. 31, 1874, the balance of net profit realised by the Great Indian Peninsula was only 219,976l., while the amount of guaranteed interest which the Indian Government had to advance was 567,316l. In the case of the Bombay, Baroda, and Central India, the net revenue earned in the six months ending Dec. 31, 1874, was 52,453l., while the Anglo-Indian Treasury paid guaranteed interest in the same period to the extent of 192,782l. The net earnings of the Madras in the second half of 1874 were 89,059l., while the guarantee payment of the Anglo-Indian Treasury for the same period was 250,162l. In the case of these three companies alone the Anglo-Indian Treasury was a loser by its guarantee to the extent of about 650,000l. And the guarantee leakage did not stop here. It was increased by a corresponding loss upon the South Indian, the Scinde, Punjab, and Delhi, &c., so that, altogether, the Anglo-Indian Treasury is now very shy in giving any more interest guarantees. Certainly, the guaranteed lines of British India have conferred solid strategic advantages upon the English in India, and have given them a material hold upon the vast peninsula of Hindostan such as they never before possessed. Certainly the guaranteed lines of British India have also opened up, to some extent, the resources of that immense quarter of the world, and have increased, *pro tanto*, the revenue of the Indian exchequer. Nevertheless, the interest burthen which the five per cent. guarantee system has entailed upon the Indian exchequer is severe, and it is not at all surprising that the Indian Government should have evinced a disposition to undertake the construction of the new lines authorised in India upon its own account, to carry them out in a lighter and cheaper fashion, and to give no more guarantees.

However, the great group of guaranteed Indian lines must be regarded as an accomplished fact. The network has been carried out, whether the system pursued in its development was an exactly wise one or not, and it now remains to turn the 5000 miles of guaranteed line to the best possible account, and to work it as cheaply as may be. One good result which has attended the establishment of the guaranteed railways in India has been a certain amount of progress in the utilisation of the native coal resources of India. The Nerbudda Coal Company, for instance, has at last, after many weary fruitless years, found a good outlet for its produce upon the Madras and Great Indian Peninsula systems. The East Indian Company has also encouraged in a satisfactory fashion the working of native

coal, and has already profited rather materially thereby. It is clear, however, that more must be done with the utilisation of the native coal wealth of India if the guaranteed railways of India are ever to produce better balance-sheets than those which they now periodically exhibit. Short feeders and more common roads are also needed to enable the guaranteed lines to fully accommodate the districts which they are intended to serve. These various measures will, doubtless, receive due consideration in official quarters; but meanwhile the partial failure of the guarantee system chills, to some extent, the enterprise of the Indian Government in the important matter of Indian railway development.

SCIENCE OF STEAM.—The second part of Mr. N. P. Burgh's "Practical Treatise on the Science of Steam in Relation to the Economy of Fuel in Modern Engines and Boilers" has just been issued, and is fully equal in character and general "get up" to its predecessor. The plates, which form the most valuable portion of the work, comprise diagrams of upwards of two dozen arrangements of cylinders and valves for compound engines from the time of Hornblower to the present; and a series of diagrams showing the relative position of the pistons and cranks of high and low pressure cylinders of a compound engine. The number will be appreciated by practical men.

STREET'S INDIAN AND COLONIAL MERCANTILE DIRECTORY.—The edition for 1875-6 of this valuable directory has just been issued (London: G. Street, Cornhill; Street Brothers, Serle-street), and it would be scarcely possible to say more in its favour than that it gives evidence of the same amount of care having been bestowed upon its production as upon its predecessors. To give an idea of the extensive range of information furnished by the volume, it will suffice to state that it embraces the whole of the Indian and Colonial possessions of Great Britain, and with regard to these the various steam routes, rates of fares and times of transit, are given, thus placing concisely before the public, the different facilities offered by the several companies, and enabling them easily to select the most advantageous course for their purpose. Particulars of the various railways in operation or construction are also supplied where practicable. All the London agents to each of the banks are named, so that the merchant is enabled to see to whom to apply where financial information is needed in connection with any particular town or city. Full particulars are likewise given as to the principal products, and the articles in which the trade of each place chiefly consists, so that merchants can at once tell (guided by the customs tariffs given), with regard to shipments, what class of goods would be likely to prove most remunerative, &c. The number of towns and cities represented has again been slightly increased. Messrs. Street remark that still more would have been included but for the principle by which they have all along been actuated—never to give any information that is not (as far as all possible care and labour can make it) perfectly reliable. The value of the trades' directory of the several colonies, &c., and of the details of population, extent of country, &c., is almost incalculable, and they afford a ready means of enabling the man of business to ascertain where there is a probable outlet for his products, and to what extent any given market is supplied. Even a directory is not altogether uninteresting when carefully perused, and the Indian and Colonial is no exception to the rule, for the engineer of the Japanese Imperial Railway is Mr. Boyle, the accountant of Nagpore is Mr. Cooke, and the Receiver-General at Ottawa is the Hon. Thos. Coffin, and so on in innumerable other cases. That the volume may be of the utmost possible value to merchants and others for whom it is intended, similar details to those already mentioned are given for Rio de Janeiro, Bahia, Rio Grande do Sul, Buenos Ayres, and other South American cities, as well as for many of the principal commercial towns of Great Britain and Ireland. The production of the work must have involved an immense amount of time and labour; but all this will be repaid by the result, as the directory is one which no merchant with any business worth mentioning can afford to be without.

LEAD MINING IN THE NORTH OF ENGLAND.

NO. I.—THE LONDON LEAD COMPANY'S WORKS.

The works of the London Lead Company, in the North of England, are the largest of their kind in the United Kingdom. They embrace mines in Weardale and Teesdale, in Durham, in North Yorkshire, in Westmoreland, and in Cumberland, the whole extent of royalty held in these different districts being not less than 75,000 to 80,000 square miles. The London Lead Company has a most interesting history. It was founded in the reign of Queen Anne, from whom it received a special charter of incorporation, and it is worthy of note that it is the only company in Great Britain, except the Bank of England, that holds a charter direct from the Crown. Tradition and the archives of the company together afford the following particulars as to the origin of the company. A quaker lady, of the name of Fox, in travelling from the North to London in the old stage coach *regiment*, had her attention called to the fact that in the hills and dales of the Northern Counties there were valuable minerals which it only required capital to develop. At the same time she saw for herself that there was a sturdy, but poverty-stricken, population available for working the mines, and to whom the chance of employment in such an industry would be a positive boon. She, therefore, on her arrival in London, laid the matter before several of her quaker friends, who were induced to aid her in subscribing the necessary capital, and the company was thus projected. Some of the mines which the newly-formed corporation undertook to work on Alston Moor had been worked in the time of the Romans. In the Silver Band Mine, on the Alston Hills, traces of Roman workmanship have been found, together with a number of Roman coins, thus indubitably proving that Caesar's legions had not only established themselves in this part of the country, but had also followed the arts of peace with tolerable success. In one of their mines on Alston Moor, which they worked until a few years ago, when the lode came to an abrupt termination, the company have records of regular working for more than 500 years, and they estimate the value of the lead obtained from the mine during that time at not less than 5,000,000l. sterling. One of the company's mines in Teesdale, which was opened out a few years ago, has turned out one of the richest of its kind in the world. For the last two years the company have raised from this mine, with only 100 hands, not less than 2000 tons of pig-lead per annum. This is a greater achievement in its way than anything that has been done at the celebrated Van Mine, where it requires 500 men to raise about 6000 tons of lead ore per annum. The total quantity of pig-lead produced by the company has for some years past averaged about 10,000 tons per annum. The total number of hands employed, including artisans and general labourers, is about 2000. It is not so long ago since the London Lead Company and Mr. W. B. Beaumont, M.P., the owner of the celebrated Allenheads Mines, could either throw into or withdraw from the market lead enough to "rig" or "bear" it at pleasure, and even yet they exercise a more considerable influence on the lead market than any other English producers. But within the last few years a great development has taken place in Spain, which now annually throws into the English market nearly as much lead as the total quantity raised at home, while the extensive lead mining operations carried on in America by such companies as the Richmond Consolidated has also exercised an appreciable effect in discounting the influence of English firms.

The principal mining operations of the London Lead Company are carried on in Teesdale, on the fells above Middleton. They have here the almost undisturbed possession of a vast tract of moorland belonging to the Duke of Cleveland, and stretching from Middleton, in Teesdale, on the one side, to Stanhope, in Weardale, on the other. Between these two termini there is a road used almost solely by the lead company, where one may travel for half-a-dozen miles without seeing the slightest trace of civilisation. On the other side of the Tees the company have a large royalty leased from Mr. John Bowes, of Streatham Castle, and in all cases the royalty payment is one-sixth of the total quantity of lead produced. The company's miners have often to walk a long distance from their homes to the mine. Their principal place of residence is in and around the pretty village of Middleton, which may be called the mining capital of the North. Generally speaking, the miners are very comfortable—the result of sobriety and steady industry. They usually work 40 hours per week; and in order that they may have two clear days in each week for the cultivation of the small holdings which most of them have acquired on the moors or in their immediate vicinity, they compress their 40 hours per week into four days—Monday, Tuesday, Wednesday, and Thursday—thus leaving the two last days entirely free. Their average earnings will be about 24s. per week, free of all extras and deductions. They have a mode of managing their affairs which is as successful as it is exceptional. Every year they hold a meeting, and appoint one of their number to act as the medium of communication between themselves and their employers. It is the duty of this delegate to see that as far as possible the men do their duty to their employers, and the employers fulfil their obligations towards their men. There is a set of rules and regulations for the conduct of the miners. A breach of these rules, or direlection in any other way, is generally attended by a specified fine, but the employers instead of inflicting the fine on the real culprit—whose culpability they might possibly fail after infinite trouble to establish—impose it upon the delegate who acts as the vicar of the men, and whose business it is to ascertain as best he can the offender, for whose offence he is thus made responsible, and then deduct the penalty from his wages. If it is found impossible to trace the offence to its real source the amount of the fine is generally distributed over all the men in the mine or colony where the offence occurred. This plan has hitherto been found to answer remarkably well. It relieves the employers from a great deal of harrassing trouble, and is calculated to put the men on their good behaviour.

Under the able and energetic management of Mr. Bainbridge, the London Lead Company's mines are generally remarkable for their adoption of all the most improved processes and appliances available in this branch of mineralogy. The company as now constituted is chiefly composed of wealthy London bankers, who have unlimited capital at their disposal, and when funds are required they are readily forthcoming. The *modus operandi* of winning the lead is much similar to that adopted at other mines in the North. The drifts are made about 6 ft. 6 in. high, and 4 ft. 6 in. wide, and for the purpose of securing greater safety they are always arched, except where driven through the solid rock. For the purpose of making the arching more easy, the drifts are generally driven in the shale formation. The lead ore is broken up by Marsden's patent Blake's stone and ore crusher. The company have seven or eight of these machines in operation at their different mines, and they answer the purpose of their application better than anything yet devised. After the ore has been crushed it is carried from the bottom trough of Blake's ore crusher by a series of vessels, which are placed at much the same angle, and are moved in much the same way, as the buckets of a dredging-machine. These vessels deposit the ore in a trough, which is worked by an automatic motion, and where by the application of water the precious mineral is separated from the base matters in combination with which it is found. The process was formerly carried on entirely by hand, the ore being placed in a vessel much the same as an ordinary corn sieve, and shaken backwards and forwards until the greater specific gravity of the lead brought it to the bottom. Of the other appliances in operation there is, perhaps, not much to be said that would be altogether new to our readers. The dressing-floors generally are constructed in the same way as others of their kind in the North, and the ore-dressing machinery is so perfect and complete that the company secure all but a trace of the lead. Within the past few weeks the company have adopted a new process for the desilverisation of lead which is entitled to notice from the valuable economy which it promises to introduce. A short description of this process will not be out of place.

It is now rather more than two years since M. Rozan, a Frenchman, introduced to the world the new process for the desilverisation of lead, which bears his name, but it was not adopted in this country until it was taken up last year by Mr. Cookson, of Newcastle, and Mr. Cookson reported so favourably on its results that

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WEST CRAVEN MOOR LEAD COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867, whereby the liability of each shareholder is limited to the amount of his shares.
Capital £30,000, in 3000 shares of £10 each,
of which 1200 are now offered for subscription.
Payable 21 per share on application; £2 per share on allotment; and the balance as required by instalments not exceeding £2 per share, at intervals of not less than six months.
Share Certificates will be issued in exchange for receipts on fully paid-up shares.
Applications may be made for shares to be paid in full, upon which a discount of 5 per cent. will be allowed.
If no allotment be made, deposits will be returned in full.

DIRECTORS.

EDWARD HILTON, Esq., Radfield, Clapham Park, London, S.W.,
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Street, London, E.C.
(With power to add to their number.)

HANKERS.

THE ALLIANCE BANK, Bartholomew-lane, London, E.C.

SOLICITORS.

Messrs. LEARROYD, LEARROYD, and CO., Albion Chambers, Moorgate,
London, E.C., and Huddersfield, Yorkshire.

MANAGING DIRECTOR AND SECRETARY.

GRANVILLE SHARP, Esq.

OFFICES.

No. 2, GRESHAM BUILDINGS, BASINGHALL STREET, LONDON, E.C.

PROSPECTUS.

This company is formed for purchasing an extensive mining property, and working its many lodes on a scale commensurate with their undoubtedly great productive power.
It is situated between the rivers Wharfe and Nidd, 4 miles west of Pateley Bridge, and 5 miles east of Skipton, in the county of York; the turnpike road being its southern boundary.

The property is about a mile long and nearly a mile wide, affording ample scope for extensive working, and is held by lease for 21 years, at a royalty of 1-14th, bearing date 8th day of June, 1875.
Twelve well-defined east and west lodes traverse its entire extent, and there are several cross-courses intersecting them, by which they will doubtless be as favourably influenced as they have been by similar cross courses in the neighbouring Cockhill and Sunde Mines.

It is of importance that there are extensive workings on the banks of several of these lodes; their existence, continuity, and value being thus proved, and first costly explorations avoided, as well as many years of labour saved. Although the average depth of such workings does not exceed 25 fms., they have produced considerable quantities of lead.

The neighbouring mines are among the most celebrated in the kingdom, having been worked for hundreds of years, produced immense quantities of ore, and paid large profits. These nearest are the Cockhill, Sunde, Burhill, North Rake, York, and the Duke of Devonshire's famous Grassington Mines, which last-mentioned are said to have realised profits amounting to as much as £70,000 in one year; having been worked uninterruptedly for over half a century. As regards the great productiveness of the lodes in the Cockhill and Sunde Mines, it is only necessary to state that they have been worked to the depth of 100 fms. (some of the points having yielded as much as 8 tons of lead to the fathom), and that the lodes on the many lodes opened out exceed 8 miles in extent. In proof of their continued productiveness a steam engine has recently been fixed at the lowest point underground for the deeper development of them. They have been at work for centuries, their returns and profits in excess of those of the Grassington Mines. Many of the same lodes traverse the entire extent of West Craven Moor, and have proved productive to the depth of working, although only 25 fms. below surface; moreover, being in the same mountain lime rock, there is every reason to expect equally great results from them as any that they have ever realised in Cockhill and Sunde—that is to say, on being opened out a little deeper in richer ore-bearing ground, and on a scale commensurate with their capabilities.

In the western portion of the grant, a level is driven a long distance eastward, and it is proposed to continue it (on the course of a lode which has produced many hundreds of tons of lead) to come in under the workings on the two newly discovered valuable lodes, which will drain them to the depth of 50 fms. Moreover, by putting out cross cuts to the parallel lodes they also will be drained, leaving thousands of fathoms of dry backs to be taken away, independent of any pumping machinery, thereby effecting a very great saving, more particularly now that steam-engine fuel is at such a seriously high price. The 5 ft. newly-discovered east and west lode is near one of the north and south ones, and although only proved to the depth of 9 fms. over 20 tons of lead have been got and sold from it. It has produced already 1½ ton of ore to the fathom. Capt. Williams in his report, says, "It is altogether as grand a looking lode as any ever opened out in any mine in the district at such a trifling depth." About 30 fms. further west another important discovery (greatly enhancing the value of the property) has been made, the lode producing over 1 ton of lead to the fathom. It has been opened out 4 fms. in length and 6 fms. in depth.

The ore is for the most part in a solid form, and requires very little dressing—little more than hand labour being necessary. The smelting works are only about 2½ miles from the mines, with a good road thereto, the cost of smelting being about 3s. per ton, opening out the lodes from £3 10s. to £4 10s. per fathom, and sinking shafts £3 to £10 per fathom, there being plenty of good miners in the neighbourhood.

The accompanying satisfactory reports of reliable mining agents enter fully into particulars, allowing of no doubt in looking forward to the success of deeper developments. They must be carefully read to appreciate the full value of this property, which to attempt to fix would not be a little pretentious.

Mr. J. H. HITCHINS, one of the most enlightened authorities of the day, possessing a sound knowledge, such as is only acquired by long and varied experience, says in his report:—"Although the great account given me of this property led me to think that I should find it a very valuable one, I did not expect to see lead veins pointing so unmistakably to the realisation of great and early success, which the discoveries already made in my, indeed, although only 9 fms. deep, in a course of ore worth over £20 per fathom bring in the Blackhill adit and put out cross cuts for draining and working four or more parallel lodes to a depth of 50 fms., independently of any machinery, will not necessitate a large expenditure than £6000, if so much; paying for all required dressing, and other machinery, means, and appliances. This will be getting at little cost a very valuable mine, and it is not the case of being too sanguine, but I have no fear of results proving me to be so." The value to be claimed for this enterprise is based on its many ore-producing lodes, not like the success of many mining companies, depending on one lode only. Attaching due importance to its many lodes, and their facilities of speedy and cheap development, "several of them having been very rich in the neighbouring mines," the opinion is justified that this company is embarking in an undertaking that will ensure the shareholders early and highly remunerative dividends.

Capt. R. Southey, of the West Chiverton Mine, after dwelling on some of the main points, concludes his report thus:—"I have no hesitation in saying that, seeing no many lodes in close proximity, with such facilities for opening them out, also taking into consideration the amount of lead ore got from the few fathoms of ground only worked on two of them, and to no greater depth than 9 fms., that the success of West Craven Moor appears to me to be a certainty."
The conclusion does, indeed, seem to be irresistible that if any property not more deeply developed can justify being recommended as certain to result in a very profitable investment, West Craven Moor is pre-eminently entitled to be considered such.
The only contract entered into by the company, or the directors or trustees thereof, is one dated the seventeenth day of July, one thousand eight hundred and seventy-five, made between Henry Lambert and William Brodie of the one part, and Granville Sharp on behalf of the company, of the other part, which is an underwriting, the said Messrs. Lambert and Brodie to assign to the company, when required, the lease ready executed by them of the mining ground by the Lord of the Manor of Appleton-Wharfedale.

Application for shares must be made per annexed form, but no application will be entertained unless the deposit of £1 per share has been paid on the number applied for. Should no allotment be made, the deposit will be returned without any deduction.
(The discoverer of the Devon Great Consols Mines, which have paid £1,192,000 in dividends.)

REPORT BY MR. J. H. HITCHINS.

The additional knowledge that I have gained of this property by a third visit much strengthens the high opinion that I have formed of it. The first newly discovered lode, although only as yet explored to the depth of 9 fms. (by a shaft 4½ ft. wide, composed of gossan (oxidised ore and spar), carbonate of lime, white lead and blue lead, that is to say galena; presenting altogether such a highly mineralised and fully approvable character as to justify the opinion that it will, at but lead at the deepest point of development, and is evidently improving. The length of the bottom of the shaft, and of an equally favourable character. This is beyond a doubt a very valuable lode, upwards of 20 tons having been sold of the ore already made; the lode being 5 ft. wide, and worth from 1 to 1½ ton per fathom. It has been opened out for about 4 fms. in length and 4 fms. in depth, 4 tons 16 cwt. having been sold of the ore that it has so soon produced. I have no hesitation in saying that these two discoveries alone justify a very high value being claimed for this property, and they are intersected by cross courses, there being also observable closely in connection with similar cross courses intersections and points of conjunction elevated Sunde and Cockhill Mines, and no doubt they will prove equally productive in West Craven Moor. This opinion is firmly supported by analogy, to their extent guide in judging of the value of mining properties. The important question whether the West Craven Moor lodes are in the true ore-bearing rock or lime as the adjoining mines. In truth, several of them have been more or less extensively productive also, and to depths varying from 15 to 20 and 25 fathoms, having (drainage levels) and only discontinued for want of capital to bring in adits. These workings have proved the existence of the lodes, their continuity in depth and extent, as well as their productiveness, and it is to be confidently relied on

that the deeper development of them will (as in the adjoining mines) be attended with very profitable results. Moreover the shafts and adits on some of the lodes, and not far off from others, for intersecting and draining them much deeper (costing many thousands of pounds and saving many years working) are of much too great importance to be lost sight of.

The neighbouring mines (Cockhill and Sunde) are 100 fms. deep, and their levels are so many, so lengthy, and on so many lodes, as to measure altogether over 8 miles; having at some points turned out as much as 8 tons to a fathom. I strongly advise bringing on westward the deep adit on the Hardgate end lode to unwater much deeper the productive old workings thereon, and driving cross cuts to therefrom, for opening out many lodes and veins at depths of 50 fms. and 60 fms., which no doubt will be as productive as West Craven Moor as in Cockhill and Sunde; the great importance of such a deep drainage level being too evident to need enforcing. In the western part of this property is Blackhill adit, which I also strongly advise being continued eastward, as it will come in 4 fms. under the shaft and workings on the two newly-discovered lodes, and by putting out cross cuts to the parallel lodes (intersecting four in driving less than 60 fms.) many thousands of fathoms of ground will be workable independently of any pumping machinery. Assisted by the information derived from many reliable sources touching the trials of the former workers and their results, also attaching due importance to the reports of Messrs. Phillips, Williams, and Woodmass (sound local mining authorities), and with full confidence in my own knowledge of the primary conditions on which depends successful mining in this district, more particularly speaking, the productiveness of lodes in the mountain lime rock, the conclusion is irresistible that West Craven Moor is a property of immense value. Of the many lodes comprised within its extensive limits, the two particularly brought under consideration in this report are of the most immediate importance, producing already at the depth of a few fathoms 1½ ton of ore to the fathom. Although the great account given me of this property led me to think that I should find it a valuable one, I did not expect to see lead veins pointing so unmistakably to the realisation of great and early success, which the discoveries already made may indeed be said to ensure. To sink the present shaft (already 9 fms. deep, and in a course of ore worth over £20 a fathom), bring in the Blackhill adit, and put out cross cuts for draining and working four or more parallel lodes to a depth of 50 fms., will not necessitate a larger expenditure than £6000, if so much; paying for all required dressing and other machinery, means, and appliances. This will be getting at little cost a very valuable mine, and it is not the case of being too sanguine, but I have no fear of results proving me to be so. I have more confidence in my judgment now than I had when introducing the Devon Great Consols Mines, as justified by 30 years additional experience, although I said from the first their results would take the mining world by surprise. The close upon £1,200,000 dividends that they have paid cannot but be considered a brilliant realisation of that prediction. Although such prizes are "few and far between," it is not too much to be lieve "there are as good fish in the sea as ever." That there is a good one in West Craven Moor is my firm conviction, although I do not say that it is another such as the one caught in the Devon Great Consols. If only one-fourth as good, the shareholders will have ample reason to be satisfied.
J. H. HITCHINS.

Report by FRANK PHILLIPS, Bowerley House, Pateley Bridge, Yorkshire.

I have again made an inspection of this property, which exceeds a mile in extent and is about a mile in width, having the continuation throughout, to its western boundary, of several of the lodes of the Cockhill and Sunde Mines, which have been worked for more than 200 years, and have yielded many hundreds of tons of lead to the fathom. In West Craven Moor, although not many of the lodes, comparatively speaking, have been worked, and only by shallow shafts and drifts, on account of the want of capital for pumping machinery, or bringing in drainage levels to develop them deeper, they have produced considerable quantities of ore. The West Craven Moor, like all the neighbouring mines—viz., the Cockhill and Sunde, Burhill, North Rake, Yorkshire, Appleton-Wharfedale, and the Duke of Devonshire's Grassington Mines, which have yielded enormous profits—are in the well-known mountain lime-rock. The lodes in West Craven Moor have been worked to depths varying from 10 to 15 and 20 fathoms below the surface, and are composed of gossan, carbonate of lime, barytes, carbonate of lead, and galena of high percentage; the close similarity of the mineral characteristics of the productive lodes of the district rendering their selection certain, and ensuring profitable mines being opened out on them. An adit, commenced many years since in the western ground, has been driven a long distance east on one of the lodes, from which many hundreds of tons of lead have been got. It should be driven with all possible force to a north and south lode, seen at the surface, producing good stones of ore. At such intersections cross-cuts should be put out; and as the depth will be about 50 fathoms, it is only reasonable to expect that the lodes will make great deposits of lead, and on the neighbouring mines.

Quite a new lode has been opened out, close to the north and south one just referred to, by a shaft sunk in it from the surface to a depth of 9 fms., and at little above the bottom thereof about 7 fms. have been driven on it, being from 4 to 6 ft. wide, composed of gossan, carbonate of lead, and galena, and altogether a fine looking lode indeed. I have no doubt as to this discovery being the top of a very great deposit of lead. It is very evident that it will much improve as depth is gained; 20 tons of lead ore have already been got and sold from this shallow and limited working. This is, beyond all doubt, a good paying lode. The light thrown on the value of West Craven Moor, by the enormous quantities of lead that have been got from its lodes in the Sunde and Cockhill Mines close by, is of great importance. The lodes that have only been "scratched" over, so to speak, in West Craven Moor, have been worked in those mines to a depth of 100 fms., having at some points yielded as much as 8 tons of lead per fathom. A new steam-engine has just been fixed underground for working the courses of ore deeper. Some idea may be formed of the enormous quantities of lead that the Cockhill and Sunde Mines have produced from the fact of there being close upon nine miles of levels altogether upon their numerous lodes. They were worked, according to the records of Nid's mine's diary, before the Christian era, and have paid a profit. The deepest point of these mines, in a rich course of ore 18 in. wide, is from 30 to 40 fms. deeper than any working in West Craven Moor. On the south is Burhill Mine, which has been extensively worked; on the north are the celebrated Merryfield and Stoney Groves Mines, and on the west the Duke of Devonshire's famous Grassington Moor Mines, which have produced as much as £70,000 in one year, the main lodes being still very productive at the deepest working. These mines are in precisely the same rock formation as West Craven Moor, it being the true lead ore-bearing mountain lime-rock, and almost all the ground having been taken away from the bottom workings to the surface in many places, and for great lengths. It is the opinion of this miners of this district that West Craven Moor comprises equally valuable ground; many of the south lodes in the Sunde and Cockhill Mines, as well as others, going into it. The deep adit should be pushed forward with all speed west, to drain the cross-cuts therefrom, a dozen lodes, which will then be workable dry to depths of 50 and 60 fms. A great deal more might be said in favour of this undoubtedly most valuable property, but it is, in my opinion, unnecessary. With a moderate capital, and only common good judgment, more than one mine is to be opened out in this extensive tract to pay large profits in a comparatively short time.

FRANK PHILLIPS,
Mineral Agent to John Yorks, Esq., Bowerley Hall,
Pateley Bridge, Yorkshire.

Report by DAVID WILLIAMS, Manager of Old Merryfield Mines, Pateley Bridge, Yorkshire.

This property is about three miles from Pateley Bridge in the direction to Skipton, and in the heart of one of the most celebrated mining districts in the kingdom; the Cockhill and Sunde Mines being on the east, with over eight miles of levels altogether on their numerous lodes. They were worked, according to the records of Nid's mine's diary, before the Christian era, and have paid a profit. The deepest point of these mines, in a rich course of ore 18 in. wide, is from 30 to 40 fms. deeper than any working in West Craven Moor. On the south is Burhill Mine, which has been extensively worked; on the north are the celebrated Merryfield and Stoney Groves Mines, and on the west the Duke of Devonshire's famous Grassington Moor Mines, which have produced as much as £70,000 in one year, the main lodes being still very productive at the deepest working. These mines are in precisely the same rock formation as West Craven Moor, it being the true lead ore-bearing mountain lime-rock, and almost all the ground having been taken away from the bottom workings to the surface in many places, and for great lengths. It is the opinion of this miners of this district that West Craven Moor comprises equally valuable ground; many of the south lodes in the Sunde and Cockhill Mines, as well as others, going into it. The deep adit should be pushed forward with all speed west, to drain the cross-cuts therefrom, a dozen lodes, which will then be workable dry to depths of 50 and 60 fms. A great deal more might be said in favour of this undoubtedly most valuable property, but it is, in my opinion, unnecessary. With a moderate capital, and only common good judgment, more than one mine is to be opened out in this extensive tract to pay large profits in a comparatively short time.

DAVID WILLIAMS,
Mineral Agent to John Yorks, Esq., Bowerley Hall,
Pateley Bridge, Yorkshire.

There are workings on six lodes in the western ground, being limited, however, with one shaft about 30 fathoms deep, now under water. Miners who worked in it report that there is a good course of lead in the bottom thereof, it having been discontinued only on account of the water being too quick. With a view of draining and working this valuable portion of the property, an adit level was started, which is driven to within a short distance of the shaft, so that with but a comparatively small outlay, the rich lode of ore at the bottom of it is to be reached. About 80 fathoms eastward of this level, on a parallel lode, there is a shaft sinking, which is now about 9 fathoms deep. At a little above the bottom thereof a drainage has gone vertical, about 10 fms. deep, the lode being from 6 to 6½ ft. in width, comprised of barytes, crystallised spar, gossan, carbonate of lead, and galena, being, in fact, a regular course of ore, worth 1½ ton to the fathom, and altogether as grand a looking lode as ever opened out in any mine in this district at such a trifling depth. Recently there has been another discovery made about 30 fathom west, which greatly enhances the value of this property. Although the lode has only yet been seen about 4 fathoms deep, it produces over a ton of lead to the fathom. The Blackhill Level is soon to be brought in to unwater these lodes to a depth of about 50 fathoms, which alone will establish a very great value for West Craven Moor. There are also in advance of the level four powerful north and south lodes, one of them being between it and the shaft referred to. The ore ground that will be workable without the aid of any pumping machinery above the Blackhill Level to be extended east, and the deep level west, together with the ore ground above the levels to be driven in both directions on many parallel lodes, will be sufficient for establishing extensive and profitably productive mines in West Craven Moor, to say nothing of their development in the much richer ore ground below.

DAVID WILLIAMS,

Mining Agent, Old Merryfield Mines, near Pateley Bridge.

Report by R. SOUTHEY, Manager of West Chiverton Mine.

After several days carefully inspecting this property, the following may be taken as a correct opinion of its value:—The grant is about one mile in length on the east and west lodes, and about a mile in width on the north and south courses, being close to the celebrated Sunde and Cockhill Mines, which, as is well known, have been exceedingly productive for lead ore. There are twelve east and west lodes traversing its entire length, and the several north and south courses being their "feetings." A shaft has been sunk on one lode about 9 fathoms from the surface, and about 6 fathoms of ground opened thereon. It is over 4 feet wide, composed of white lead, carbonate of lime, blue lead or galena, carrying a beautiful "gossan" on the back, presenting altogether a most splendid appearance, and 20 tons of lead have already been sold from this very shallow and limited working.

About 30 fms. west, a very good discovery has been made on another lode which has been opened on 4 fms. deep, and the same in length, from which 4½ tons of lead have already been sold. It appears from the underlie that it will in depth form a junction with the other, and it is a well known fact to every practical miner to be of the highest importance, the largest deposits of mineral being met with at such points. Tens of thousands of tons of lead have been raised from the shallow workings of these lodes, which have been extensively worked, but shallow, not exceeding an average depth of 20 fathoms. For want of capital for the deeper

development of this undoubtedly very valuable property, the two principal points have been entirely neglected, being the bringing in of the deep adits—viz., the one westward, which will be over 40 fms. deeper than the present workings, and the Blackhill adit eastward—the former for opening out the Hardgate end lode on which it will be driven, and several parallel lodes to the north by cross-cuts; the latter for the deeper development of the two east and west lodes now worked, and four other parallel lodes south. The Blackhill adit will unwater the lodes 50 fathoms deep, and by a cross cut of not more than 60 fathoms, will intersect six east and west lodes. These lodes are in the mountain lime rock, precisely the same as the adjoining Cockhill and Sunde Mines, having also corresponding bearing and underlie, and in fact there being not a shadow of a doubt that they are the same lodes.

One very important point must not be lost sight of, which is so many north and south courses intersecting the east and west lodes, the former, no doubt, being feeders to the latter. Moreover, the north and south courses are known to make rich deposits of lead independently, and at the same time they offer every facility for cross-cutting to the former. These lodes in the neighbouring Sunde and Cockhill Mines have yielded most abundantly, in some points as much as 8 tons to the fathom to the depth of 100 fathoms, and there is no doubt they will be equally productive in West Craven Moor. I, therefore, strongly recommend driving the two deep adits, and putting out cross cuts to intersect the diffident lodes. The importance of such a deep drainage cannot be over estimated, as it will render available thousands of fathoms of ore ground to be worked without the aid of any machinery. In conclusion, I have no hesitation in saying that, seeing so many lodes in close proximity, with such facilities for opening them out, also taking into consideration the amount of lead ore got from the few fathoms of ground only worked on two of them, and to no greater depth than 9 fathoms, that the success of West Craven Moor appears to me to be a certainty.
R. SOUTHEY.

Latest Report by DAVID WILLIAMS, Manager of Old Merryfield Mines, near Pateley Bridge, Yorkshire.

Pateley Bridge, Yorkshire, 7th June, 1875.
Blackhill Level: This level is driven east upon the Blackhill lode, and is about 600 fathoms in length. The lode in the forebrest is thrown to the north of the level, being from 3 to 4 ft. wide, composed of lime, spar, calcite, and pitches of lead ore, worth in the roof about 5 cwt. per fathom; this point should be pushed forward with all dispatch, as the lode is improving, and, judging from the old workings on surface, we shall in a few fathoms intersect the great course of ore worked upon for over 200 yards in length, and as deep as could be worked with water. About 25 fathoms in advance of the forebrest a powerful and well defined north and south lode is crossing, and as soon as the level is driven to that point we shall drive north and south on the vein to intersect the parallel lodes, several of which are untouched beyond surface scratchings, and in my opinion are the champion lodes of the district.

No. 1 East Shaft: This shaft is being sunk 9 ft. by 5 ft. inside the timber, leaving 5 ft. 6 in. for drawing purposes, and 3 ft. 6 in. by 5 ft. for ladders, &c., and it is 150 fathoms deep from surface. The lode in the bottom is about 6 ft. wide, composed of gossan, limspar, carbonate of lead, and galena, worth 1 ton 15 cwt. of lead ore per fathom. No. 2 Shaft is about 12 fathoms deep, sunk upon the lode, which is underlying south, and will intersect the other lode in depth. This lode is about 2 ft. wide, composed of barytes, limspar, and lead ore, worth for the latter 2 cwt. per fathom. We sold last month about 11 tons from this place. After several years' experience with the working of this and adjoining mines, the more I am convinced of its value. And I don't hesitate to say, provided Blackhill level is driven eastward to the above shafts and cross cut south to the parallel lode, and levels extended on the lodes, you will have in West Craven Moor a lode and very profitable mine at a very small outlay.
DAVID WILLIAMS.

To Granville Sharp.

FORM OF APPLICATION FOR SHARES.

(To be retained by the company's bankers.)

WEST CRAVEN MOOR LEAD COMPANY (LIMITED).

GENTLEMEN,—Having paid to your bankers the sum of £ , being £1 per share deposited on this application for shares of £10 each, in the West Craven Moor Lead Company (Limited), I request you to allot me that number of shares; and I hereby agree to accept of the same, or any less number you may allot me, and to pay the balance in respect of the same.

Name (in full) _____
Address _____
Date _____ 1875 Profession (if any) _____

(Form to be signed by an applicant desiring to pay up his shares in full upon allotment.)

I desire to pay up my shares in full upon allotment.

Signature _____

N.B.—Share certificates will be issued in exchange for receipts of fully paid-up shares.

FOREIGN MINES.

ST. JOHN DEL REY.—The directors have received the following telegram from Morro Velho, dated Rio de Janeiro, July 20: Produce second division (eleven days) of July, 19,500 oit.—7550; yield 10½ oit. per ton.

CEDAR CREEK (Gold).—T. B. Ludlum, July 13: Since my last we have finished clearing up the Yankee claim, which, I regret to say, has not proved very satisfactory. We are washing most of the time on the clay, which contains an immense number of large rocks, but no gold. We now have quite a broad bench upon which the clay is washed off, leaving quite a favourable place for the rock to rest, which will enable us to drive in the bottom gravel of which we were deprived this past run. I am hopeful that the present run will be satisfactory. Everything (except the derrick, which is down) is working smoothly, the gravel looks good, and I think we can remove it quite fast, so that I feel warranted in the belief that we will have about \$7500 in all. The expenses will amount to about \$5500. Our water supply is still lessening; we now have only about 250 inches running in the ditch. I have sent orders to commence driving on the upper reservoirs to day. We have enough water in the Alta reservoir to run the Yankee until that from the mountains reaches here.

INDEPENDENCE (Gold).—The latest advices from the mine by letter are to the 13th ult., at which date everything was progressing most favourably, and the erection of the new mill was being rapidly pushed forward. A general meeting of the shareholders has been called for Tuesday next, the 10th inst., at 2 o'clock, at the company's offices, at which Mr. T. C. Kitto will be present to afford any information that may be required as to the present and prospective value of the property.

OREGON HYDRAULIC GOLD MINES.—The report from G. S. Powers, superintendant of the Bixby Creek, after describing the various deposits, which embrace a superficial area of about 550 acres, states that they will not be exhausted in 50 years. The contemplated ditch can be easily extended, at comparatively small expense, to carry water into sections Nos. 2, 3, 4, and 5, and only short tunnels will be required to open out either one of these claims for washing to the bed rock, as the different gulches intersecting this channel are quite precipitous, giving a perpendicular fall of over 800 ft. to Galice Creek, a distance of less than ½ mile, these claims being at such an elevation above the creek, that the dump can never be effected by filling up. This gravel deposit has an additional value arising from its situation, being at a low altitude, it can be worked during the winter months without the hindrance of snow or ice. Galice Creek, Blandish's, Applegate, rich and rocky gulches will exceedingly rich up to a point immediately below where they cut through this channel, and nothing of any amount was found above. The gold taken from these claims cannot be distinguished from the gold taken from the creek and gulches. It is estimated that \$4,000,000 were taken out of Galice Creek from a point immediately below these claims to where it empties into Rogue River, a distance of 3½ miles. I consider the title to the ditches of water rights perfect. An additional 300 in. of water have been recently located with the view of continuing a patent from the United States, covering the five sections herein described, and after a period of 60 days of publication, should there be no adverse claimants, the title to the entire property will be perfect. There is no question connected with this property which I have not thoroughly ventilated, and I can heartily recommend it.

* * * Owing to a pressure on our space, we are unavoidably compelled to omit several Foreign Mines and other Matters.

CHAPEL HOUSE.—The latest report from this colliery shows that the output for last month was 6614 tons—about the usual average. The colliery has been and is working six days a week, while the mine owners in the district are only able to keep the colliery going half time. This is the more satisfactory, inasmuch as the company have plenty of orders for all the coal they can get, and are even still buying to supply their customers. The new shaft is now sunk to a depth of 138 yards. The exceptionally inclement weather has somewhat interfered with the brick-making, but it is now going on satisfactorily again. The new engine pillars are at their full height, and the stonework connected with them is going on so rapidly that they will soon be ready to receive the large engine's winding drum, while two of the new boilers have been fitted. The third will be in position in a day or two, and the large gear and other interior works are proceeding rapidly. The new engine chimney—a fine well-finished structure of 144 ft. in height—is complete. The enlargement of the reservoir, for the purpose of providing an ample supply of water for the boilers, is being pushed on with all possible speed, and, in short, all the massive and substantial works in progress for the increase of the business are being prosecuted with the greatest energy. We understand that a dividend will be declared next week.

GROGWINION (Lead).—The sales of 70 tons of ore for the current month has brought a better price than the last, 14½, being the highest tender, against 12½. The general satisfactory appearance of the mine continues at all points, and good progress continues to be made in rising from the deep adit level to the intermediate level.

Min.—At the St. John del Rey Company's mines, Morro Velho, Minas Geraes, Brazil, on June 12, JAMES MUTER ANDERSON GORDON, engineer of the company, aged 31 years. Killed accidentally by being drawn into air compressing machinery which he was proving in the performance of his professional duty. The deceased was second son of J. N. Gordon, superintendent, acting attorney for his father, and H. M. B. Vice Consul for the province of Minas Geraes.

—On June 1, at Columbia, South America, Captain ALFRED HARPER, manager of the Tolima Gold and Silver Mines, third son of Captain S. Harper, of Halkin, Flintshire. Aged 27 years.

—At Penzance, on Thursday, in his 71st year, Mr. WILLIAM JORY HESWOOD, F.R.S., formerly, and the last of her Majesty's Assay Masters of Tin in the Colonies of Cornwall and Devon. The death was not unexpected. For some weeks he had been confined to his room, though not taking to his bed. Early yesterday morning the inmates of the house heard a sound as of something heavy falling on the floor, and upon their entering the room in the absence of Mr. Heswood, they found him dead. It appeared to have left the air chair in which he was in the habit of sitting. His researches on the metals of Cornwall and Devon, not only of Cornwall and Devonshire, but of Ireland, Wales, North-Western India, North America, Chili, and Brazil, and the quantities of water present in mines, have made his name well known among geologists and miners. The Murchison medal and Geological fund were, in February last, awarded to him by the Geological Society of London, in recognition of the utility of his 60 years' labours.

1 AUG. 7. 1875.

mediate future of the tin trade seems to depend on whether any of the big holders of foreign tin are determined or compelled to sell out, and so face their loss at once. Tin is now a little firmer.—*West Britain.*

* With this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Original Correspondence—On the Anthracite Coal of De Mont, near Cuneo, in the Italian Alps (Chev. W. P. Jervis); Mining in India: Coal Beds of East Canyon and Rush Valley (W. Bredemeyer); Mining in South Australia; Mining in Queensland; Mines and Mining at Lake Superior; Flagstaff Mining Company; Cardiff and Swansea Smokeless Steam Coal Company (H. R. Evans); Intercommunication in Railway Carriages; Draining Mines—Steam Pumps; Divining Rod (R. Symons, E. Skewes); Educational Mineralogy (T. A. Readwin); West Esquaire Lie Mining Company; Auditors of Mining Companies; Grosvenor Lead Mining Company; West Maria and Fortescue; West Chiverton Mining Company (H. Mansell); Javali and Chontales Mining Companies.—Foreign Mining and Metallurgy—Decline in the Value of Quicksilver—Mining in Nevada—the Comstock Lode—Gryll's Annual Mining Sheet—Mineral Resources of the South-West of Ireland, No. XVI.—Australian Mines Reports—Foreign Mines Reports—Direct-Acting Steam Pump; (illustrated), &c.—Meetings of the London and County Banking, West Tankerville, Wheel Crebor, Manx Silver-Lead Mineral, Tyllywyd, and Rookhope Valley Companies.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, AUG. 6, 1875.

COPPER.		£	s.	d.	£	s.	d.
Best selected... p. ton	88	0	8	10	0	0	0
Tough cake and tile	86	0	0	8	0	0	0
Sheeting & sheets...	81	0	0	9	0	0	0
Boils	82	10	0	9	0	0	0
Bottoms	80	0	0	0	0	0	0
Old	80	0	0	0	0	0	0
Australian, W. & A.	90	0	0	9	10	0	0
ditto other brands	86	0	0	0	0	0	0
Chili bars, g.o.b.	79	0	0	0	0	0	0
Wire	0	0	1	1	1	1	1
Tubes	0	1	0	0	0	0	0
BRASS.							
Sheet	9d.	10d.					
Wire	9d.	10d.					
Tubes	9d.	10d.					
Yellow metal sheeting	75d.	8d.					
Sheet	75d.	8d.					
SILVER.							
ore on the spot	23	15	0	24	0	0	0
" to arrive	23	15	0	24	0	0	0
ZINC.							
In sheets	29	10	0	30	0	0	0
TIN.							
English blocks	82	0	0	83	0	0	0
Do, bars (in bales)	83	0	0	84	0	0	0
Do, refined	84	0	0	85	0	0	0
Banco	80	0	0	81	0	0	0
Strait	80	0	0	81	0	0	0
Australian	78	0	0	79	0	0	0
TIN-PLATES.							
IC Charcoal, let qua.	1	10	0	12	0	0	0
IC Do, 1st quality	1	10	0	12	0	0	0
IC Do, 2d quality	1	10	0	12	0	0	0
IC Do, 3d quality	1	10	0	12	0	0	0
IC Coke	1	10	0	12	0	0	0
IC Ditto	1	10	0	12	0	0	0
Canada plates, p. ton	15	0	0	15	0	0	0
Ditto, at works	14	0	0	15	0	0	0

* At the works, 1s. to 1s. 6d. per ton less. † Add 6s. for each. Tonne-plates 2s. per box below tin-plates of similar brand.

REMARKS.—The Bank Holiday seems to have inaugurated the general summer holidays; the attendance on 'Change is not so numerous as it has been, and merchants and dealers appear to be endorsing the opinion that there will be but little business doing by absenting themselves from town and enjoying themselves elsewhere. The continuance of the fine weather is a great boon, and although portions of the crops have suffered to an extent that is irremediable, still the average produce may be very much better than was at one time expected. This will do much to alleviate suffering, and will pave the way to a period of activity which, sooner or later, must once again characterise the metal and other trades. It may be but poor comfort, yet it is certainly a matter of satisfaction that every branch of trade, almost without exception, is in much the same condition as the metal trade, with, perhaps, this difference, that while in other branches of industry there are aggravating combinations of unsoundness which cause the existing dulness to assume a very serious aspect, metals are, as a rule, thoroughly sound, and so soon as the period of activity comes round there is nothing, so far as can be seen at present, to prevent the metal market from at once participating in the improvement. Markets at home and abroad are not overstocked, and the make is being, or has been reduced very much. True, there are appliances already in existence which, not so many years ago, were called into active operation to meet the abnormal demand which had sprung up, but these have now fallen into disuse, and the hands that were employed upon them have sought employment in other directions. No mere temporary stimulus to trade would induce the masters to put this extra machinery once more into motion, so that not much is to be feared on this score. The labour now obtainable is sufficient to meet any ordinary demand which may arise, and the efforts of the masters are directed to the maintaining of the balance between supply and demand, and to prevent supplies exceeding the demand. With a fair harvest, and no tightness in the money market, and the atmosphere cleared by the removal from the scene of the firms which have been engaged in an unhealthy course of trading, there seems fair reason to expect that things will at all events not grow worse, but that a gradual improvement may be looked for; but it may be some time yet ere the change for the better takes place.

COPPER.—The market has been steady. Sellers have shown increasingly less disposition to part with their holdings. Judging from the appearance of the market, and the published returns of stocks, it does not seem probable that lower rates for copper will rule, but that the day may not be so far distant as some suppose when higher prices than those now current will characterise the markets. The charters from the West Coast for the last half of July were announced on Tuesday, and are as follows:—1400 tons, 800 tons being bars for the Continent, 600 tons for England, and 200 tons ore and regulus. Since then the market for foreign copper has become firmer, and Chili bars have been dealt in at 79. 10s., cash. English is very much neglected, and, indeed, the business in copper has been altogether considerably restricted. The quotation for Chili to-day is 79. 10s. to 80. 0s., cash 14 days, and about 79. for distant delivery.

IRON.—Nothing can be well more unsatisfactory than the reports of the iron trade from the various centres of this industry. From Wales the condition of affairs is viewed as almost hopeless. Were it not the duty of the chronicler of the state of trade to give a faithful report of the existing state of things it would be infinitely more agreeable to close the page, and add not another line until a different condition of affairs called forth a more encouraging statement than that which now only in truth can be given. The outcry in Wales is that there are no orders. The quotations of prices, be they what they may, have no effect in stimulating trade. Some of the masters, in their earnest endeavours to meet the exigencies of the occasion, have quoted prices which leave them no margin, or at least but a very narrow margin indeed, for profit, but without any result. Buyers resolutely hold back, and refuse to give out their orders. This is no time for makers to act independently of buyers. The time was when, if the public refused to come into the market, manufacturers could still keep their men employed making for stock in the knowledge that sooner or later their stock would become available in the market; but now such a course would be suicidal, and the sound position occupied by the ironmasters could no longer be maintained. At the present moment the energies of the masters are devoted to the contraction of the iron trade, so far as manufacture is concerned, and the development of the coal trade. The demand on foreign account is good, and this is almost the only department of the South Wales trade in which there is any animation.

The trade in the North of England is a shade better than that of South Wales. The demand for pig-iron continues good. The Scotch market still continues to afford efficient support to the Middleborough production. Shipments abroad, too, are on a large scale and in excess of the quantity usually required at this season, so that it is expected that the returns of stock in the hands of ironmasters in the North will compare favourably with previous months. The make has been restricted, and the deliveries must have been considerable. The trade in the Tyne in the matter of iron shipbuilding shows a measure of improvement, and from this source the market has received support. No. 1 pig-iron now rules about 55s.; No. 3, 49s.; No. 4, 47s. In manufactured iron rails stand at about 7. for ordinary sections; light rails are quoted 5s. to 7s. 6d. more. Plates for shipbuilding, 4s. 8s. Merchant bars, 7. 10s. to 7. 15s. The Scotch pig-iron market has been firm during the week, and the quotation to-day for warrants is 62s. 9d. buyers, and 62s. sellers.

LEAD.—There is no material change to report in the position of this metal. Lead is firmly held, and the demand suffices to maintain the firmness of the market. Good soft English pig is not obtainable under 22. 5s.

SILVER.—Very little doing in this metal, but market very firm, at 24. for Silesian, and 18. 5s. to 18. 10s. for hard, the latter very difficult to obtain in any quantity.

QUICKSILVER continues steady at 10. per bottle.

TIN.—The market has exhibited increased firmness during the last few days. It was very generally expected that the monthly return for July would prove unsatisfactory, but upon publication the deliveries were found to be considerably larger than was thought to be the case, and the market became firmer, and fractionally higher prices have obtained both for Straits and Australian tin. The statistics of tin and the aspect of the trade are such as to call for satisfaction. It would seem quite possible that a slight increase of activity in consumptive demand would materially affect the position of the metal. To-day's quotations for tin are—Straits on usual cash terms, 80. per ton; and for forward delivery, 78. to 79. 10s., according to prompt. Australian, usual cash, 76. to 77. per ton.

TIN-PLATES.—The policy of restricting the make has been strictly

adhered to, but the condition of things is unaltered. There is no demand to speak of, and apparently no prospect of improvement.

THE IRON TRADE (Griffiths's Weekly Report).—Friday evening. The market for Scotch pig in Glasgow has been steady all the week at about 60s. This afternoon (Friday), however, all the makers have raised their price 2s. per ton. Warrants have advanced the same amount. The price of warrants, therefore, at the close on the Glasgow Exchange was 62s. 6d., rather buyers. This gives a gain of a little over 2s. per ton on the week's operations. The price of makers' iron now we quote:—Gartsherrie, 70s. 6d.; Coltness, 71s. 6d.; Calder, 70s.; Langloan, 69s. 6d.; Summerlee, 67s. 6d.; Monkland, 68s.; f.o.b. Glasgow; Glengarnock, 68s.; Eglinton, 62s. 6d.; f.o.b. Androssan; Shotts, 70s.; f.o.b. Leith; Kennel, 63s. 6d.; f.o.b. Boness. The iron trade presents no feature of particular interest this week. The state of the weather has been favourable for puddling; and, considering that the number of puddling furnaces at work throughout the kingdom is considerably diminished, the favourable weather after referred to has enabled the puddlers to do more than an average amount of work for one of the hottest weeks (in ordinary times) in the year. An arrangement between the Staffordshire ironmasters and the puddlers has been arrived at in regard to the wages of the latter, which is fixed at 9s. per ton for the present. Our market is quiet for most kinds of iron. We have no sales of magnitude of rails to report. This branch of trade continues inactive. Buyers appear to be more scarce for heavy rails. We had some enquiry for tram-rails of light sections, but no actual business done this week. The general demand for all kinds of iron continues about the same as last week. The orders going down to the works are frequently for best Yorkshire and Staffordshire iron. We have no failures to report in the iron trade, and we are glad to say that rumours of failures no longer exist in this department. The tin-plate trade is quiet—prices unaltered since last week.

CHEMICALS, MINERALS, AND METALS.—(Messrs. Berger Spence and Co.)—Soda: Cream caustic, 60 per cent., 12s. 12s. 6d.; white, 60 per cent., 13s.; soda ash, 15d. to 1 15-16d.; soda crystals, 5s. to 5. 5s.; bi-carbonate, 13s. 5s. to 13. 10s.; salt cake, 2s. 12s. 6d.; Glauber salts, 2s. 15s.; Bleaching Powder, 4s. 7s. 15s.; Alum: 7. 10s. for loose lump; ground, 8. 6s. 3d.; f.o.b. 8. 1s.; Nitrate of Soda: At 11s. 3d. to 11s. 6d.; Ammonia: Sulphate, white and grey, 13s. 5s. to 13. 10s.; carbonate, 7d.; muriate, 30s. to 32s. 10s.; sal ammoniac, first, 45s.; seconds, 44s.; Potash: Muriates, 80 per cent., at 6s. 10s. to 6. 12s. 6d.; f.o.b.; Prussiate, red, 2s. 3d.; yellow, 1s. 1d.; chlorate, 9d.; bi-chrome, 6 1/2d.; Iron Salts: Green and rusty coppers, 60s. loose; in casks or barrels, 65s.; Copper Salts: Sulphate of copper, 26s.; Litharge: Best flake, 25s.; second quality, 24s.; Sugar of Lead: Brown, 26s. 10s.; Acid: Tartaric, English, at 1s. 6 1/2d.; foreign, 1s. 6 1/2d.; oxalic, 5 1/2d.; sulphuric, 3s. 10s. to 3s. 15s.; carbolic, No. 1, 9 1/2d.; picric acid, 1s. 10d. per lb.; Arsenic: 15s.; Magnesia: Epsom salts, 3s. 7s. 6d.; refined, 4d. 10s.; Esparto: Oran, fair average quality, 6s. 10s. per ton; Susa fair, 7. 15s.; best, 8s. 10s. per ton.; Brimstone: Best thirds, 7. 2s. 6d.; phosphate of Alumina, 3s. to 3s. 10s. per ton.; Pyrites: Spanish cupreous, 6 1/2d.; non-cupreous, 8d.; China-clay: 15s. f.o.b. Cornwall; best quality, 24s.; Phosphates: High strength, 80 to 85 per cent., 1s. 4d. to 1s. 5d. per unit; Estremadura, 1s. 3d.; ordinary, 60 per cent., 1s.; precipitated phosphate of lime, 70 per cent., 5s. 15s.; super-phosphates, 80 per cent., soluble, 3s. 6d. per unit; 25 to 26 per cent., 3s. 10s.; Manganeses: Ores, 110s. for 70 per cent.; Iron Ore: Hematite, 16s.; 22s. 6d.; puddling, 24s. to 27s.; colliery, 5s. to 10s.; Algerian, 55 per cent., 27s.; c.i.f. U.K.—"Aysreome" Yorkshire pig-iron: No. 3, 49s. 6d.; No. 4 (foundry), 48s.; net cash, or 1s. extra four months' bills; Scotch pig warrants, 60s. to 60s. 3d.; Staffordshire bars, 8s. 15s. to 9s.; Copper: Chili bars, 78s. 10s. to 79. 10s.; Tin: English ingot, 87s.; Straits, 78s. to 78. 10s.; Tin-plates: M.I.C., 21s. 6d. per box.; Lead: Best English soft pig, 22s. 15s.; "Panther," delivered at Manchester, Antimony: French Strain, 56s. to 56d.; Spelter: Silesian, 24s. 6s. to 24. 10s.; Sheet Zinc: N. 6, 31s. 15s.; N. 7, 30s. 15s.; N. 8, 29s. 5s.; N. 9, 28s. 15s. c.i.f., Hull or Liverpool.

THE MINING SHARE MARKET, on the whole, is looking better, and tin mines have been more in request at a fair advance in price. Both copper and tin are firmer, and in reference to the latter metal we understand that the demand, which has very greatly increased of late years, is now more than the regular supply, but there is a large stock on hand which must be worked off before we can hope for any material rise in price. During the month of July this stock was decreased by 500 tons, while the imports during the same time were 200 tons less than they were in the month of June.

The shares in request have been Dolcoath, Carn Brea, Tincroft, Wheel Crebor, Tankerville, Roman Gravel, West Tankerville, Marke Valley, West Chiverton, Hingston Down, Parys Mountain, Pennerley, Pateley Bridge, Great Laxey, South Condurrow, and a few others.

Tankerville have advanced to 11 1/2, 12; the directors have declared a dividend of 5s. per share. The mine, the agent states, never looked better. Roman Gravel, 11 1/2 to 12 1/2; the 95 shaft, on Roman lode, is worth 45s. per fathom; the 95, which is now getting up to the main run of lead, is worth 90s. per fathom; the 80, south of Corfield, 60s. per fathom; and lode in winze on middle level, south of Corfield's, is worth 100s. per fathom. Carn Brea shares have advanced to 36, 38; Dolcoath to 39, 41; Tincroft to 19, 20; Cook's Kitchen, 3 1/2 to 4; Bog, 8s. to 10s.; Devon Great Consols, 2 1/2 to 3; East Lovell, 6 1/2 to 7; West Chiverton, 16 to 17; the accounts to be presented at the meeting on Thursday show:—Sales of lead, April 2 to July 24 inclusive, 8241. 1s. 8d.; blende, March 24 to June 29 inclusive, 2207. 9s.; discount, &c., 13s. 11s. 11d. = 10,462. 2s. 7d. Five months' cost (that due on July 17 being estimated at 1250s.), the costs of the four preceding months being 4968. 15s. 3d., 6218. 15s. 3d.; merchants' bills, 1761. 12s. 3d.; dues and other expenditure, leaving balance, being profit, 1716. 10s. 3d. At the previous meeting there was a debit balance of 3069. 10s. 3d. The April call and the 20 weeks' profit has converted this into a credit balance of 1507. 7s. 7d. The statement of assets and liabilities show cash in hand, 28s. 15s. 1d.; balance of assets over liabilities, 1507. 7s. 7d. Among the liabilities are 1629. 16s. due to merchants, and 1101. 1s. 8d. to lords for royalty; and on the other side there is a balance of 5416. 6s. 1d. to receive on silver-lead and blende sold. East Pool, 13 to 14; Great Laxey, 14 to 15; Hingston Down, 1 to 1 1/2; Ladywell, 2 1/2 to 3 1/2; Marke Valley, 1 1/2 to 2; Old Treburget, 4s. to 6s.; Parys Mountain, 12s. to 14s.; Pennerley, 1 1/2 to 1 3/4; Penstruthal, 7s. 6d. to 10s.; Cathedral, 25s. to 30s.; New Hendra, 22s. 6d. to 25s.

Wheel Crebor shares have been in fair demand, and advanced to 2, 2 1/2; at the meeting, on Thursday (full particulars of which will be found in another column), the accounts showed a profit of 207. 17s. 7d., and assets over liabilities of 937. 3s. 10d., every item of cost being charged up to the end of June. The sales of copper and mundic realised 1202. 17s., and the agent stated that had the lode continued as rich as it was in the 48 and 120 ft. levels a few months ago, the profit would have been greater by 500s. It was the nature of the lode, however, to have these sudden changes, and any day rich courses of ore may come in again. In the bottom of the 120 the lode is 8 ft. wide, and worth, besides copper, 7 to 8 tons of mundic per fathom, worth 17. 5s. per ton. This he considers a fine indication for copper, and the winze will be at once sunk below it. The committee also called the attention of the shareholders to the fact that whereas a few years ago the average price of the ore was scarcely 3s. per ton, it now averaged 5s. per ton. South Carn Brea, 1 1/2 to 1 3/4; South Caradon, 100 to 110; South Condurrow, 4 1/2 to 4 3/4; South Crofty, 15 to 17; Van, 24 to 26; Van Consols, 2 to 2 1/2.

Prince of Wales, 1/2 to 3/4; at the meeting on Friday (particulars of which will be found in another column), a call of 1s. per share was made. The accounts showed a loss on four months' working of 656. 11s. 11d., and a balance of liabilities over assets of 454. 10s. 5d.; the meeting was adjourned to Aug. 27 to receive a report of Capt. Andrews, of Wheel Crebor, and one of the committee, as to the state of the mine and the expense of erecting new machinery. West Basset, 4 1/2 to 4 3/4; West Seton, 20 to 25; West Tolgus, 46 to 48; Wheel Grenville, 2 to 2 1/2.

At the North Treskerby meeting, held in Cornwall, a call of 2s. 6d. per share was made. The accounts for six months to the end of April showed a debit balance of 542. A cross-cut is being driven to cut the Highburrow lode. At the East Basset meeting a call of 3s. 5s. per share was made. The accounts, extending over nine months ending March 31, showed a balance against the company of 1539. Wheel Jane, 2 1/2 to 3 1/4.

West Tankerville, 1 to 1 1/4, and in request; at the general meeting, on Thursday, Mr. E. Crawshaw was elected a director, and the accounts showed an available working capital of nearly 5000s. The 63 ft. level is worth 20s. per fathom; the 50, 20s. per fathom; winze below the 46, 43s. per fm.; and the three stopes in the back of the 50 each worth 40s. per fathom; making the different points of operation worth in the aggregate 203s. per fathom. The loss in six months was 877. Capt. Waters, the manager of Roman Gravel, stated to the meeting that the levels in that mine were about 45 fms. only from the boundary of West Tankerville. Plymington, 6s. to 8s.; the winze below the 12, under adit, is down to the 24, and the lode has considerably improved, worth 1/2 ton of lead per fathom. The agent expects here to meet with a good length of productive ground, and adds that it very encouraging to see the lode regaining its productiveness at this point. New Rosewarne, 1/2 to 3/4; no change in the ends, but the rise in the back of the 58 has improved for copper, worth 8s. per fathom. St. Patrick, 20s. to 25s.; Glaisdale, 19s. to 21s.

Birdseye, 1 1/2 to 1 3/4; Chontales, 11s. to 13s.; Eberhardt and Aurora,

8 1/2 to 8 3/4; Emma, 1 1/2 to 1 3/4; Flagstaff, 1 1/2 to 1 3/4; Frontino and Bolivia, 1 to 1 1/4; Javali, 9s. to 11s.; Malpasso, 12s. to 14s.; Rica Gold, 4s. to 6s.; Richmond, 12 1/2 to 13 1/2; Sweetland Creek, 2 1/2 to 3 1/4; Tecoma, 3 to 4.

The Market for Mine Shares on the Stock Exchange during the week has been moderately active, especially considering the comparatively small attendance of operators, and the general laxity of business usual at this season of the year. Lead mines continue to attract chief attention, an additional impulse having been given to this description by the further advance in the price of lead.

In Silver Mines the leading feature has again been the demand for Richmond Consolidated shares, which have advanced to 12 1/2, 13 1/4; of \$25,000 were forwarded for sale last week. The bullion produced this season is \$573,000, the make of bullion since the end of February is \$794,000. The refinery this season has produced gold and silver bars to the value of \$351,000, irrespective of refined lead. This week's cable return is an advance of \$9000 over its predecessor, and is so far satisfactory. A scarcity of good smelters still exists, and ordinary labourers have been chiefly employed. A good deal of the comparatively low-grade ore from the older chambers has been worked of late, the richer ore on the forward portion of the mine being used as a flux. The new engine for the hoisting works is a 16-in. cylinder with 5-foot stroke. It is considered that this power will be sufficient for a depth of 2000 feet. It will probably be some years ere such a depth is reached, but as the lode is going down with every indication of continuance, and the old hoisting-engine was already overtasked, it was deemed advisable to provide at once for a large increase. Sinking is going on in the Richmond hoisting-shaft, and the ground is rather more favourable than before. The exploratory works have of late been very heavy. The Richmond Company hitherto have been more fortunate in this respect than their neighbours the Eureka Consolidated, who for a long time had to work through unprofitable ground ere reaching the vast masses of ore now rewarding them. The Richmond Company, with the experience of the successful pioneer work carried on close up to their boundaries, can now afford to engage in starting new drifts and tunnels through intervening limestone, knowing that, though such labour is costly and unproductive for the moment, yet the ultimate result is no longer speculative, the position and direction of the new vein being so clearly indicated. To all intents and purposes the late discovery is the commencement of a new mine, which will probably need a distinct series of exploratory works, though some of the old drifts may be utilised, and the Lizette tunnel be again turned to good account. We are informed that on July 13 the Richmond shaft was down 648 ft., and the drift started at the 600 ft. level to cut the main lode was in 138 ft., leaving 32 ft. more before hoisting through. When this last distance is completed sinking in ore in the main lode can be resumed. The Lizette tunnel had been continued 88 ft., and it was expected that ore would soon be struck in that direction. The drift commenced in the new discovery, next the Eureka Consolidated boundary, had been run 71 ft.; for the last 10 ft. the lode was found to flatten, just as it occasionally did in the old workings. The winze was still being sunk in ore, which next the footwall is low grade, but with streaks of rich ore occasionally intervening, a recent assay giving 14 per cent. in lead and \$100 in gold and silver.

Emma, 1 1/2 to 1 3/4; according to private advices Mr. Attwood has been surveying the Bay City Tunnel, which confirms the statement made by Mr. H. Sewell in a letter which appeared in the Journal some two months since. This tunnel is stated to be on the Emma Company's property, and that to extend it immediately under the present workings in the Emma Mine can be accomplished in about two months, and at a cost of not more than 1000s. The immense importance of this work as to the almost immediate future of the mine cannot well be overestimated. It appears that the Equitable is the name of one of the tunnels in which the Emma vein has been cut, and that about 5 tons of ore have been removed. The Howland Tunnel, it is now reported, has not cut the Emma but another vein, which is now producing ore yielding \$30 to \$40 in silver and 25 per cent. of lead per ton. If these advices be founded on fact the enquiry may be legitimately made as to the reason the information has not been officially announced for the benefit of the shareholders. Flagstaff, 1 1/2 to 1 3/4; Last Chance, 1 to 1 1/4. Tecoma, 3 to 4; the latest advices (which appear in another column) state that from the assay report of the ore extracted on the work done it would be seen that it averages well, and shows what may be expected when the main deposit is reached.

The market for Hydraulic or Gold-Washing companies has shown no material alteration. Sweetland Creek shares have been enquired for at 3 to 3 1/4, but the stock is scarce, and few transactions have been recorded. Birdseye Creek and Blue Tent are unchanged. Cedar Creek are quoted lower, and a large number of shares have changed hands at the lower figure. In another column we publish extracts from the promised report on the Oregon Hydraulic Gold Mines. It is well worthy of consideration. The property is of large area, and is, apparently, valuable. Blue Tent, 4 1/2 to 5 1/4; very good progress is being made with the construction of the ditch—nearly 600 men at work on it, and operations would be pushed on until its completion. We understand that a very fair amount of the debentures have been taken up, but the directors would like a few more applications, so as to fully meet the requirements of the company. Birdseye Creek, 1 1/2 to 2; the work here was progressing much as usual. The agent, Mr. G. S. Powers, anticipated a supply of water until the beginning of the present month. The final clean-up of the season would, therefore, be made in about ten days. Last year the washing continued into October. Cedar Creek, 3 to 4; in another column will be found a letter from the agent. The work in the Yankee claim was still impeded by the quantity of boulders met with, but Col. Ludlum thought that, from the arrangements now made, this source of obstruction and delay would be obviated for the future. Sweetland Creek, 3 to 3 1/4; the advices from the superintendent are still good. The last are dated just before the clean-up, when he was putting in another blast in readiness to re-commence washing without delay.

Foreign Gold Quartz Mines have been inactive, and prices have been somewhat lower all round. St. John del Rey shares close dull at 390 to 400, the supply of stock having somewhat increased, whilst there has been less buying orders. The produce for the second division of July, 11 days, is 19,500 oits., valued at 7556s.; yield, 104 oits. per ton. Don Pedro, 3 to 3 1/2; Chontales, 3 to 3 1/2; Port Philip, 1 1/2 to 2; Javali, 1 1/2 to 2; Almada and Tiritio, 1 1/2 to 2; Sierra Buttes, 1 1/2 to 2; ditto Plumas Eureka, 1 1/2 to 1 3/4. London and Californian, 4 to 5; the report issued preparatory to the meeting on Aug. 10 is viewed unfavourably, and the shares have declined in consequence. Independence, 2 1/2 to 3; the advices from the mines report several improvements in the drivages, more particularly on the New Rose ledge, which yields quartz worth \$7 per ton. The works connected with the erection of the new stamps are progressing rapidly, and the stamps are expected to be at work by the end of September at the latest. Frontino and Bolivia, 1 1/2 to 1 3/4; the returns for May left a profit of 1039s., but from this has to be deducted 275s. expended on capital account. The mines are reported to be looking well.

Scottish Australian, 1 1/2 to 1 3/4; the sales of coal during May amounted to 10,034 tons. English and Australian, 1 1/2 to 2; at the forthcoming meeting a dividend of 2s. per share will be recommended to be paid out of the estimated profit on the company's operations for the half-year. Kapanga, 2 1/2 to 1 1/2; since last advices the engine-shaft has been sunk and timbered 16 ft., making a total depth of 290 ft., leaving only 10 ft. to sink to reach the 50. The ground continues good for sinking, and a new leader has been struck, and the ground has become more favourable for progress. The machinery and pitwork are in good order, and every dispatch is made with the sinking operations.

Lead Mines have been represented by Pateley Bridge shares, which have been largely dealt in at 6 1/2 to 7 1/4; several important improvements have taken place during the week. The "new discovery" has further improved, being now valued at 10s. per fathom, the lode being 3 ft. wide. The rise in the back of this level is worth 20s. per fathom; both these bargains are worked at 50s. per fm., including all costs. Satisfactory progress continues to be made with

Notices to Correspondents.

PATENT COTTON GUNPOWDER COMPANY.—I beg to call your attention to an error in the report of the Patent Cotton Gunpowder Company's meeting in last week's Journal. I am stated to have said "that I had a letter from Mr. Fell, of Newcastle," &c., &c.; it was, I believe, Mr. Punshon who thus spoke. Will you be good enough to correct this, and oblige.—R. P. VIZER, *Stoke Newington, Aug. 5.*

REGULAR MINING REPORTS.—If "Investor" will call at this address any day between the hours of 10 and 4 every information will be given him with reference to the Eclipse Mine. The board of management are pleased to state that operations are progressing most satisfactorily, and the shareholders are fully aware of the fact.—FREDERICK R. BLUETT, Secretary, 15, Coleman-street, London.

WORKING MINES.—"Subscriber" (Settle).—The right to the minerals belongs, as a rule, to the freeholder; but, as there are exceptions, it will be desirable for you to consult your solicitor with regard to the particular property in which you are interested. The fees payable upon registering a company with a capital of 200,000, would be 10s.—that is to say, 10s. deed stamp on Memorandum, 10s. deed, and 5s. registration on Articles; and 8s. 15s. fees on registration of 20,000, capital. The solicitor's fees would be in addition, supposing a solicitor to be employed, which is not necessary. All the office fees are payable in stamps.

Received.—"J. P." (Adelaide): Thanks for the letter, and enclosures—"E. B. W."—"H. B." (Michigan)—"A. T. J."—"Amateur"—"P. N. W."—"G. B."—"G. W." (Leeds)—"Shareholder" (West Chiverton)—"M.": The matter is referred to in another column—"Shareholder" (West Esclair Lie)—"Shareholder" (New Consols): We could not publish such a letter; it should be addressed to the office—"Constant Reader" (Oswestry): We have forwarded the letter, as requested—"M." (Dublin): Next week—"T. A. Readwin" (Gold in Wales): Next week—"J. H. C."—"H. C. P."—"T. B. W." (Düsseldorf)—"Shareholder" (Budnick Consols).

IMPORTANT NOTICE.—REDUCTION OF POSTAGE ON THE "MINING JOURNAL."—In consequence of the new POSTAL CONVENTION, which came into operation on July 1, the postage of the *Mining Journal* to many countries will be reduced to one-fourth. Henceforth the subscription will be 1s. 10s. 4d. per annum (39 frs.), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, Germany, Gibraltar, Greece, Heligoland, Italy, Luxembourg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Serbia, Sweden, Switzerland, United States, Malta, Turkey, Morocco, Tunis, and the Canary Islands. Spain 1s. 10s. (50 frs.).

AVIS IMPORTANT.—AUX ABONNES ETRANGERS DU "MINING JOURNAL."—A cause de la nouvelle CONVENTION POSTALE il y aura, à partir du 1er Juillet courant, une grande diminution du prix de l'abonnement du *Mining Journal* pour bien des pays dont le taux des postes est jusqu'ici bien élevé. A partir du 1er Juillet le prix de l'abonnement sera de 39 frs., le port compris, pour l'Autriche, Belgique, France, Danemark et ses dépendances, l'Egypte, l'Allemagne, la Grèce, l'Italie, Hollande, Portugal et ses dépendances, Roumanie, Russie, Serbie, Suède, la Suisse, la Turquie, l'Afrique septentrionale, etc. Le montant, si l'on le veut, sera touché à domicile, la fin de l'année. L'abonnement continuera sauf avis contraire.

THE MINING JOURNAL.

Railway and Commercial Gazette.

LONDON, AUGUST 7, 1875.

THE UTILISATION OF SLACK COAL.

It will be a long time before the last is heard of the enormous sums of money which it is alleged were made during the brief interval which signalled what is now known as the "coal famine." Without doubt there was a combination of circumstances at that period which resulted in the making of money by some of our colliery owners. Not a little, however, of the increased income of that period was derived from the greatly augmented value, for a time, of slack coal. Large accumulations of property of this class here and there found purchasers on terms which had before been impossible of attainment. In this way that became a source of revenue which before was scarcely more than refuse. Still, as compared with the aggregate supply of the kingdom, the quantity of slack coal swept off during the coal panic was but small—the demand soon fell off, and the article is now again a drug. It is dangerously heaped up below ground, because in many cases it is less expensive to leave it there than to bring it to the surface, notwithstanding the careful watch which is necessary in order to prevent spontaneous combustion; and there are mounds of it upon the pit banks, of which many colliery proprietors would be only too happy to get rid at a low figure. Mining engineers are continually offering inducements to colliers with the view of reducing the proportion of fine coal to the minimum; and recently, more than at any other period, conditions have been agreed to whereby miners have been made to benefit in a pecuniary sense when the proportion of large coal has been above the average. Not only in the management and the daily working of a colliery has the aim of lessening the proportionate output of small coal been kept continually in view, wherever collieries have been properly conducted, but there has been much ingenuity displayed to devise means of breaking down the fast coal with as little destruction as possible. Processes of working, then, and actual manipulation by the individual collier, have alike aimed at this one economical result. But, with all this, slack accumulates, and the extent of its accumulation is the measure of the colliery owner's loss.

That man is designated the true patriot who makes two blades of grass to grow where before only one grew, and that inventor will be one of the greatest friends to the colliery interest who will show it how to realise a steady income from slack coal. Do what we may, it will never be a very profitable article, but if we succeed in making it yield only a moderate return we shall be accomplishing much. At the same time that the mining engineer has been busy in his efforts to keep down the quantity of slack produced in the daily working of his pits there has been much ingenuity displayed in efforts to utilise it, alike in the place of large coal or in the moulding of artificial fuel. Even so recently as this week prominent attention has been drawn to what is being done in the latter direction by the London and Provincial Consolidated Coal Company, at Hammersmith. On Thursday, last week, the works of this firm in Blythe Lane were visited by a party of engineers and other scientific men, who watched the process of converting slack coal into cubes of fuel by the aid of a little pitch, and tar, and farina (or starch), and plaster of Paris. No more than 10 tons a day is at present being turned out, but to that extent slack coal is being profitably utilised. What is being done by other firms having a similar object everyone acquainted with the steam coal district of South Wales, for example, well knows, and the ingenuity of mechanical engineers is being exercised in the hope of enabling our ironmasters, who are, altogether, our best customers for coal, to use slack in an increasing degree. What is being done in this regard alike in the management of blast-furnaces and of mills and forges has from time to time been set forth in the *Mining Journal*, but success has not been so conspicuous as could have been desired. We cannot, however, but believe that a source of much economy to the ironmaster will yet be developed in the slack coal which is now impeding the daily operations of our coal mines. Upon this source ironmasters have, in our opinion, to greatly depend when they seek the means of combating much of the growing opposition which they have now to meet from foreign competitors. Even without the existence of the comparatively prohibitive tariff, it must not be expected that the British ironmaster can compete with the producer of finished iron in America in those cases in which gas is obtained for fuel by merely drilling a hole in the ground. But if slack coal can be used, then we may bring ourselves somewhat nearer to the low prices which gas is enabling certain Americans to quote, and which the wider application of gas at the ironworks in the States will make less infrequent.

The opinion is held that the Crampton revolving furnace will greatly aid the ironmaster in his efforts to use slack. It is true that powdered coal is injected into the Crampton furnace, but whether it is possible, even after it has been washed, sifted, and pulverised, to use the ordinary slack of the majority of the colliery districts has yet to be established. If we are not misinformed, coal of a larger size than that which is usually denominated slack, and coal likewise of a good quality, is what the Crampton furnace needs. Even if the Crampton could be fed with pulverised slack we fear that the day has not yet arrived when the colliery proprietor can fairly look to that market as the one in which he will be able to dispose of much of his refuse coal. General discussion upon the whole problem is receiving light from across the water. Very sur-

prising results have there been obtained, in respect alike of quality and yield, by the simple process of blowing air into puddling and mill furnaces at the top, and the process is more effective when slack than when large coal is used. Moreover, it seems that experiments already begun in this country point to the expectation that while we are making excellent fuel out of the volatile properties of that which at present is hardly more than pit refuse we may be leaving valuable coke as a residuum. It is not certain that we shall be unable by this method of utilising oxygen to make slack coal burn in our locomotives and steamers. If Mr. ROGERS (of the iron-making firm of ROGERS and BURCHFIELD, of Leechburgh, near Pennsylvania) should be able to show us how to accomplish all this he will lay not alone the colliery interest of the whole world under obligation to him, but he will prove himself a benefactor to his species.

THE LABOUR LAWS.

The pertinacity of the leaders of the various trade associations in the country, more particularly those connected with mining and the manufacture of iron, with respect to legislation favourable to those they represent, has this session been most successful, and they have obtained, we believe, a great deal more than they ever anticipated. But the working man of late has been so petted and flattered by members of Parliament that all other interests appear to be so insignificant that they must give way to his claims. But those legislators who look so much to the interests of the working classes it is evident seek for present popularity with a view to future favours, so that the British House of Commons, with its working men's representatives, is fast descending to the level of the United States House of Representatives. The corruption of that body is matter of American history—or, we may say, of a number of its members, for it has within it men of the highest honour and of the greatest patriotism. But our own legislators, or a good many of them at least, are adopting the tactics that have been used by unscrupulous persons on the other side of the Atlantic for securing the favour of the lower classes. They have aided in placing a great power in the hands of trades unionists as opposed to capitalists who are large employers of labour, by repealing Acts of Parliament that, despite some anomalies, have secured the independence of the working man who did not belong to any Trades Union, and give liberty of action to all employers and workmen. Great political power, however, has been placed in the hands of those who are least able to use it wisely—we mean those without education or intelligence, for we admit that whilst there is a vast body of men steeped in ignorance who are workers, and are led by the oily tongues of well-paid leaders, yet there are others who toil hard daily who are as intelligent as any other class in the kingdom. But those men who guide the mighty power of ignorance do so for their own ends. As has been truly said, they aim at raising a despotic democracy, in which all power should be taken from wealth and intelligence and transferred to those who should represent the greatest amount of ignorance, so that Trades Unions and their leaders should be recognised by the State as a mighty and established power. By such means the really intelligent and independent working man, who has hitherto kept aloof from the demagogues and their associates, would be compelled to throw in his lot with them. We have on many occasions pointed out the despotic and tyrannical proceedings of many of our Trades Unions, and it is to be feared that with the increased power given to them there will be a stronger despotism than ever, which will compel the really intelligent working man to belong to a combination which he well knows will take away from him every vestige of his liberty as a contractor, or one having labour to dispose of.

But recent legislation on the question of labour, and its relation to capital, can be looked at from more than one point. It is, therefore, to be regretted that the claims of the employers of labour were entirely left out of consideration with regard to the measures which have just been passed by the Government, by which the future relations between masters and workmen are to be guided. This was evident from the first, for whilst on the commission appointed last year to enquire into the working of the Masters and Servants Act and the Criminal Law Amendment Act there were at the least two well-known representatives of the Trades Unionists—Mr. T. HUGHES, and Mr. A. MACDONALD, M.P.—present, there was not one member in any way connected with trade, or who was an employer of labour. How far this was fair we leave our readers to judge. The result of the declaration of Parliament, both sides of the House of Commons bidding for the support of the now popular working man, was that the Trades Union leaders obtained all they required, breaches of contract being made mere civil matters, the Criminal Law Amendment repealed, that picketing and molestation is made easier, and attended with considerably less serious consequences than it was. It was left to the Lord Chancellor to define what was molestation, and for certain offences there is a penalty of 20s. or imprisonment for a term not exceeding three months. But it is also enacted that a person "Attending at or near the house or place where a person works, or is employed, or the approach to such house or place, in order merely to obtain or communicate information, and not with a view to intimidate or to deter by serious annoyance such person from doing, or abstaining from doing, that which he has a legal right to do, or abstain from doing, shall not be deemed a watching or besetting within the meaning of this section." If this does not give a great latitude, and open the door very wide indeed to do what it is intended to provide against, then language must be very different in Acts of Parliament to what it is in ordinary matters, and as understood by all classes.

But we would ask some of our wise legislators whether they are not making a great mistake in supposing that the Unionist leaders have any right to speak on behalf of the working classes of the country? In our opinion they only represent a small section, and that the least intelligent. To dispel the illusion which many members of the House of Commons must be labouring under with respect to trade associations and their power, we will give a single illustration. The Unions belonging to the mining body are the most powerful we have, yet at the recent gathering of the Miners' National Association, of which Mr. MACDONALD, M.P., is the president, there were delegates from all the districts in the kingdom representing, we were told, 136,000 members, whilst according to the returns of the Government Inspectors for 1874, the number of male persons employed in mines underground was 428,611, and 110,218 above ground. This speaks for itself, and shows the actual power of our trade associations with respect to the number of persons employed.

THE CARDIFF AND SWANSEA STEAM COAL COMPANY.

As we anticipated in the Journal of July 10, the shareholders of this company have decided in the most emphatic manner to retain the valuable services of their Chairman, Colonel Shakespear, and Mr. Richard Shaw, M.P., has also been induced to resume his seat upon the board. The committee formed to secure the election of these gentlemen, of which Mr. H. Russell Evans was Chairman, may well be congratulated on the result of their efforts, and their victory has been so complete that the destinies of the company are now entirely in their own hands. The proxies returned were as follows:—For Col. Shakespear and Mr. R. Shaw, M.P., 4043 votes; for Mr. Coats and Mr. Mosley, 1405; and for Mr. John Corry, 476. Mr. Shaw, M.P., in referring at the meeting to the proposed removal of the office to the country, and to the suggested reduction in the directors' fees to a ridiculously small sum, struck the right key-note when he characterised these proposals as an indirect attack upon the Chairman, and evidently the great majority of the shareholders took the same view. That the vendors who had profited so largely through the company should support these suggestions was in itself suspicious, for they would be the last, one would expect, to preach economy, having regard to the enormous expenditure incurred under their management for the last two years. The result of all these proceedings was the election of a thoroughly independent board, the vendor element being now entirely got rid of. This is a fortunate circumstance for the shareholders, and the company being once more in smooth waters it may be reasonably expected that it will soon resume its position in the Dividend List. It possesses a fine property, which at the present time yields something like 5000 tons per

week of coal, of a quality not to be excelled, and there is no reason why, under good management, this quantity should not be further increased.

INTRODUCTION OF MCKEAN'S ROCK DRILLS IN SOUTH AMERICA.

It was mentioned in the *Mining Journal* of July 17 that at the St. Gothard Tunnel, in Switzerland, the McKean rock-drill has superseded all others, and, perhaps, no better evidence of the opinion than that entertained as to the efficiency of the machine could be given than that afforded by the fact announced last week—that Mr. Leon Lavoisot has become the licensee for Chili and the other mining countries of South America. Mr. Lavoisot having been for three years chief engineer to the contractors for the St. Gothard Tunnel, and having personally directed the commencement and drive of the northern end of the tunnel, has had the best possible opportunity of ascertaining the relative merits of the several drills, and by connecting himself with the McKean drill has shown not only that he is satisfied with its performance, but that he regards it as the rock-drill best adapted to ensure him success in carrying out the heavy mining and tunnelling operations in Chili which he proposes to undertake. The manner in which Mr. Lavoisot has performed his technical duties at St. Gothard and at the Simplon leaves no doubt as to his high efficiency as a civil engineer; and it may be anticipated that in connection with great engineering enterprises in South America the name of Lavoisot will speedily become as extensively and favourably known as that of Favre is at present with regard to the great tunnels of the Alps. That Chili and the neighbouring countries will be much benefited by the extension of railways beyond question, and it may be hoped that as the utmost possible facilities for tunnelling will now be within their reach very necessary extension of the means of intercommunication will not be longer delayed. The subjoined refers to Mr. Lavoisot's establishment at Valparaiso:—

M. Léon Lavoisot, Ingénieur Civil, après avoir été pendant trois ans aux travaux du tunnel du St. Gothard se rend à Valparaiso, comme représentant de Messieurs McKean and Co. pour propager l'emploi des machines de leur système dans l'exploitation des mines et tunnels du Chili.

Altorf (Canton d'Uri, Suisse), le 30 Juin, 1875.

MON CHER MR. LAVOISOT.—Au moment de votre départ vous me demandez un certificat constatant l'état de vos services depuis votre entrée dans mon entreprise. Je transcris ci-dessous les fonctions que vous avez occupées jusqu'à ce jour.

1.—Du 1er Septembre, 1872, au 1er Janvier, 1874.—Ingénieur chef de service chargé des installations de l'embranchement nord du tunnel (Goescheuen) et de la direction du percement.

2.—Du 1er Janvier, 1874, au 1er Mai, 1875.—Ingénieur chef du bureau central de direction des travaux.

3.—Du 1er Mai, 1875, au 1er Juillet, 1875.—Ingénieur chargé des études préliminaires pour le percement du Simplon et le raccord du tunnel avec Dom d'Ossola (Italie) et les lignes du Valais.

Je suis heureux en outre de rendre pleinement justice au zèle et à l'intelligence remarquables que vous avez toujours déployés dans l'exercice de ces diverses fonctions.

Recevez, mon cher Monsieur Lavoisot, l'assurance de mes sentiments cordiaux. Monsieur Léon Lavoisot, Ingénieur Civil. (Signé) L. FAVRE ET CIE.

M. Lavoisot étant au courant des progrès de l'exploitation des tunnels par la perforation mécanique, sera en mesure de donner la plus grande satisfaction dans l'exécution de ses entreprises. Nous le recommandons aux intéressés.

MCKEAN AND CO.

THE JUDICATURE ACTS.—We have much pleasure in calling attention to an advertisement in our columns of a work, shortly to be published, on the New Practice of the Courts under the recent Judicature Acts. The author—Mr. Arundel Rogers—is well known in the profession, and has gained a good reputation as the author of "The Law upon Mines, Minerals, and Quarries;" and inasmuch as there is no branch of law which will be more affected by the Judicature Acts, we have no doubt but that the efforts of the author will be duly appreciated. We could draw attention to many cases where the decisions of the Equity Courts have not been consistent with the decisions of the Law Courts in reference to mining questions, but we hope for better things in the Supreme Court of Judicature instituted under the statute laws of 1873 and 1875.

SIGNAL BELL FOR COLLIERIES AND MINES.—The improved signal bell, described and illustrated in the Supplement to last week's Journal, being one which many connected with mining will, no doubt, like to inspect, the inventor, Mr. W. Leech, of the Pepper Mill Brass Foundry, Wigan, has forwarded a sample to the *Mining Journal* Office, where it can be seen by those interested.

COAL FIELDS OF SPAIN.—M. Grand, in describing the coal fields of Spain to the Paris Society of Engineers, estimated their area at 150,000 hectares (the hectare being about 1.47 acre), from which only 500,000 or 600,000 tons are annually extracted, while Belgium, with the same area, yields 10,000,000 tons. The Spanish coal fields are situated in Castille, Leon, and the Asturias. The processes are described as being very rough and imperfect. M. Delesse stated that the coal of the Asturias was chiefly used for gas making.

COAL AND IRON IN THE UNITED STATES.—Considerable progress has been made in laying 13 miles of steel rail second track on the Philadelphia, Wilmington, and Baltimore Railroad, south of Havre de Grace. A new rolling-mill in South Chester, Pennsylvania, will be ready for service in a short time. The mill is 187 ft. by 192 ft., and contains six puddling-furnaces. The machinery will be run by two Corliss engines and four smaller engines. The capacity of the mill is 50 tons per diem. The production of anthracite coal in Pennsylvania to July 3 this year was 6,847,411 tons, against 9,153,959 tons in the corresponding period of 1874, showing a decrease this year of 2,305,678 tons. Including bituminous coal, the total coal production of Pennsylvania to July 3 this year was 8,454,988 tons, against 10,666,033 tons in the corresponding period of 1874. Trade in the anthracite coal regions of Pennsylvania has been pretty generally resumed, and the production has considerably increased of late.

AN IMPORTANT ECONOMICAL DISCOVERY.—In one of our iron-making centres experiments of great economic significance are being conducted, under the supervision of the senior partner in the firm of Messrs. Rogers, Burchfield, and Co., ironmasters, of Leechburgh, Pennsylvania, who, on only a brief visit, has arrived in England within the past fortnight. Mr. W. Rogers is no ordinary man; and although now an American ironmaster, he is an Englishman. Upon first leaving home he toiled as an ironworker in Austria, and removed thence to the United States. There he found that the very expensive iron sheets made in the ironworks of Siberia were largely used, but that neither in the United States nor in any other country beyond Russia was it known by what means the peculiar excellence of the Russian thin iron was obtained. Like "Foley the fiddler," who after two stolen visits to Sweden succeeded in filching from the ironmasters of that country the secret of making slit rods, Mr. Rogers, four years ago, went out to Siberia, and being successful in gaining admission to the ironworks there, he possessed himself of the information which all ironmasters outside Russia so ardently desired. Returning to America, he commenced making Russian sheets. The method is still jealously guarded by the Russians, and is not, we believe, known even at the present day in England. But this is not all: he has applied the natural well gas of Pennsylvania as a fuel to all the purposes of his ironworks—the heating of his furnaces and the generation of steam. More: by the application of blast, injected at the top of the furnace, he has used the principle of the blowpipe in the making of finished iron, to the conspicuous economy of the working, and the improvement of the quality. In ascertaining whether that can be done here by using blast in this fashion, which has been done at Leechburgh, Mr. Rogers is just now occupied, and the experiments have thus far promised equal success in the two countries. If all should be realised which is anticipated it will be possible to make finished iron of cheap slack instead of costly large coal, the heavy cost of setting will be saved, the quality and the yield will be largely improved, and the residuum of the coal so burnt will not be a worthless ash and cinder, but a serviceable coke. Nor is this all which is foreshadowed in this simple application of blast, above rather than below, or at the sides of a fire: Mr.

The first annual meeting of the South Staffordshire Mines Drainage Commissioners was held, on Wednesday, at Wolverhampton. Mr. George J. Barker, the Chairman, presided, and all the commissioners, as well as the principal officers, were present. Mr. George Barker was re-elected chairman for the ensuing year. The finance committee reported that the gross amount of the general drainage rate for the past year is

26,222. 13s. 7d., that of this sum 22,222. 16s. 3d. had been received up to June 30. A general drainage rate for the ensuing year was made at the rate of 1d. a ton on slack, slate, limestone and ironstone, fire-clay, coal, or other mineral raised or gotten by occupiers of mines within the drainage area. A discussion took place with reference to the arbiters making the draft awards for Tipton and Bilston district, in the course of which Mr. Dowdswell, the legal arbitrator, defended himself and his colleagues for the action they had taken, and Mr. Walter Williams threatened to resist the levying of the rates in the most uncompromising manner he possibly could. Payment was ordered of the following sums, for the cost of executing works:—Bilston District Committee, 3559. 16s. 2d.; Oldbury District Committee, 668. 19s. 1d.; Kingswinford District Committee, 618. 1s. 11d.; Old Hill District Committee, 8100. 1d.; and Tipton District Committee, 3300. After Monday next had been fixed for the hearing of appeals against the draft award for the Bilston district, and Sept. 7 in respect of the Tipton district, the proceedings terminated.

The North Staffordshire Iron Trade remains without much alteration since our last report, but, on the whole, the aspect of affairs is slightly better. The markets for coal and ironstone continue quiet, but steady at about late rates.

We have been requested to publish the following letter, which was originally addressed to the Editor of the Wolverhampton Chronicle:—

SUMMARIES OF THE STATISTICS FOR THE TWELVE DISTRICTS UNDER THE COAL MINES REGULATION ACT, FOR 1874.

SIR,—I am now in possession of the above-named document, and from it I have made a few extracts, which perhaps may be interesting to your readers. I think that the figures given are worthy of attentive consideration, because they plainly show the very high rank which Staffordshire holds among the iron producing centres of the empire.

PRODUCE OF IRONSTONE IN 1874.

The produce of Cleveland ironstone was	... Tons 5,428,407
The produce of North Staffordshire was	... 2,575,844
" South Staffordshire was	... 246,174
Total of Staffordshire	... 2,822,018
The produce of Scotland, East, was	... 701,073
" West, was	... 1,418,698
Total of Scotland	... 2,119,771
The produce of Cumberland, Durham, Lancashire, Flintshire, Westmoreland, and the Isle of Man together was	... 2,202,100

I have not any doubt in my own mind that the produce of South Staffordshire in former years was between three-quarters of a million and one million tons per annum of ironstone; but the artificial scarcity of labour brought about by the recent Acts of Parliament and by the eight-hours system in mines, which was the natural sequence of these Acts, has caused the ironstone pits in South Staffordshire to be abandoned, since they cannot now be worked to a profit; the blast-furnaces, however, have to be supplied, and to enable us to keep our 80 furnaces in blast we have to import one million tons per annum of ironmaking materials from outlying districts, and that we do import this quantity under the almost prohibitive rates of our railway companies is in itself a sufficient proof of the vitality of our trade.

The attention of ironmasters of this district has been naturally turned to the best and nearest sources of supply, and we find in North Staffordshire a superabundance far exceeding their own means of consumption and an excess above their own wants, which would more than supply all our needs if we were only permitted to obtain what we so urgently require. The ironstone of North Staffordshire is within 30 miles of our blast-furnaces, but to obtain it we have to pay over three distinct systems of railways—the North Staffordshire, the London and North Western, and Great Western Railway, each of which railways puts on a terminal rate, and the ironstone often is detained at Bushbury Junction for many days. The rate to our own furnaces is 4s. 8d. a ton, and to some other works not so well situated it is 5s. a ton. I will not go into a detailed account of all the rates on ironstones into this district, all of which have been recently advanced from 10 to 20 per cent.; but there is one rate—that from Newport, Monmouth—which has been advanced from 5s. 6d. to 6s. 11d., or 25 per cent. This is prohibitive of the importation of Cornish hematite, which at the old rate we should now receive in large quantities. Only consider what would become of the iron trade of the west coast if their Durham coke cost them 21s. per ton per mile in carriage, as North Staffordshire ironstone now costs us. Give us equal rates of freight, and we no more fear the competition of the east coast or of the west than our fathers feared that of Wales or of Scotland; but it is disheartening to know that the rate on undamaged iron from Middlesbrough to Liverpool is 7s. 6d. per ton, whilst from Wolverhampton to Liverpool, only about one-half of the distance, it is still kept up at the ancient rate of 10s. 6d. a ton.

Let us contrast the policy of the Midland Railway with that of our own London and North Western, and we shall find that with inferior natural advantages blast-furnaces are being built upon the Midland line, and the produce of these furnaces sent into our district to be worked up, whilst our own furnaces are unable to work for want of material, though in the midst of plenty.

The result of this policy may now be seen in the railway share lists, for there we find a recognition by the public of the more liberal policy of the Midland Railway Company. Our railway companies have it completely within their power to restore the prosperity of this district, and if they still decline to do so themselves will be the losers.

Before I close this letter I ought to say that, owing to a sixteen weeks' strike of colliers in 1874, the figures given represent the produce of South Staffordshire for 26 weeks only, and not for 52 weeks. Many ironstone pits were closed during this strike, some of which have not been re-opened.

BECKMISTER, Aug. 2.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week the market has remained in the same inactive state, and this being a very general holiday month does not hold out much inducement for business becoming brisker very soon. In shares of iron and coal concerns, with the exception of Glasgow Port Washington 100. shares (all paid), which have improved 3s., prices, when altered, have gone lower. The reductions comprise:—A on Arnisston; 1-16th on Benhar (3s. paid); 1 on Bolekow, Vaughan, A; 1 on Ebbw Vale; 9s. on Omoo and Cleland; and last and greatest, 2s. on Shotta. Benhar (all paid), though not quoted lower, are easier to buy. South Cleveland Ironworks 20s. shares (all paid), 2 to 3. United Bituminous Collieries, 2s. 6d. to 4s. 6d. In shares of copper concerns the movements are also adverse, Canadian Pyrites being 1s.; Glasgow Caradon 6d.; and Rio Tinto, 1-4 all lower. Huntington, at 32s., marks a fall of nearly 1/2, owing to the rumoured destruction of the works by fire, and their not being insured. The shares have now reached so low a figure that they cannot go further in that direction. Tharsis have fallen 1/2 on the old and 1/2 on the new shares; the fall in them this and last week being owing to the fall of 2d. in the unit of sulphur, which will make a difference next year to the company of no less than 40,000. If the price does not improve before they begin selling their stock. The Yorke Peninsula Company have issued their annual report, and advices from the mine still continue satisfactory, inasmuch as ore is being sold, and is expected to be sold, bi-monthly in the future. Drake Walls, 1/2 to 1; Great Laxey, 1/2 better; Gunnislake (Clitters), 1 1/2 to 1 3/4; New Consols, 1/2 lower; New Quebrada, 1/2 higher; South Roskear lower, at 4 to 6; West Esgrail 1 1/2, 1 to 1; West Maria and Fortescue, 1/2 to 1; Wheel Mary Hutchings, 1-16th to 1/2; New Pembroke, 1/2 to 1; East Caradon, 1/2 to 1; Prince of Wales, 2s. to 3s.; West Poldice, 5 to 6; and Cwm Bychan, 1/2 to 1. In shares of gold and silver mines Richmond has improved 1/2, and Frontino and Bolivia 1/2. Javali, at 9s. to 10s.; and Colorado Terrible, at 3 1/2 to 3 3/4, have an appearance of improving. Pestarena United is 1/2 to 1. Oil shares unaltered. Miscellaneous shares also show little change, the Peruvian Nitrate being now 1 1/2 (paid). Native Guano is 1 and General Sewage 3 each lower; the latter looks like improving. A detailed list of the several days' business follows:—

On THURSDAY last a moderate business was done, the chief business being in Tharsis. Benhar shares (all paid) done at 5 1/2; new (5s. paid), 5-16th to 5 1/2. Canadian Copper Pyrites done at 39s., closing 38s. 6d. to 39s. 6d. Emma, 38s. to 39s. Flagstaff, 1 1/2 to 1 3/4. Glasgow Caradon, original, done at 26s. Huntington done at 41s., closing 40s. 6d. to 41s. 6d. Lochore and Capletrae done at 5 1/2. Marbella done at 85s., closing 85s. to 86s. Richmond, 12 1/2 to 13. Tharsis opened at 20 1/2, but gradually improved to 21 1/2, from which a relapse took place to 21 1/2, the closing prices being 21 1/2 to 21 1/2; new shares opened at 14 1/2, but improved to 15, closing 14 1/2 to 14 1/2. Scottish Wagon (all paid) firm, at 12 to 12 1/2.

On FRIDAY the market remained quiet. Arnisston, 6 1/2 to 6 3/4. Bolekow, Vaughan, A shares lower, at 49 1/2 to 50. Canadian Copper Pyrites shares done at 40s. and 38s. 6d., closing 38s. 6d. to 39s. 6d. Flagstaff, 1 1/2 to 1 3/4. Glasgow Caradon (original) done at 25s., closing 25s. to 26s. Huntington shares done at 41s., closing good at 4s. 6d. to 45s.; at the adjourned meeting of this company, held to-day, none of the original directors put in an appearance, and the Chairman telegraphed to excuse himself on account of illness. Mr. Wright, one of the new directors, who presided, stated that Lord Provost Bain, Glasgow, and Provost Morton, Greenock, had paid over to the company 1000. each, received by them from the vendors as promise money; the latter gentleman also paid back, in addition, nearly 1600.

of interest. The Chairman further stated that Mr. Jamieson had promised to return 5000. which he had received also for his services in promoting the concern, and that there was pretty strong reason to believe that Mr. Henderson would see his way to restore a sum of no less than 10,000. being what he had received for the same purpose. The Chairman moved, as a matter of form, that the accounts be adopted, but this was opposed, and a committee of investigation appointed, almost unanimously, to sift the affair to the bottom. A meeting is to be held on Sept. 30 to receive this committee's report. Marke Valley, 1 1/2 to 1 3/4; Omoo and Cleland shares done at 46s. Richmond, 12 1/2 to 13. Shotts Iron shares 21-16th, being offered at 70. Tharsis done from 21 1/2 to 21 3/4, closing 21 5-16th to 21 7-16th; new shares done at 14 1/2, closing 14 1/2 to 14 3/4; the heavy fall in Tharsis shares recently is attributed to various causes. The most important one seems, however, to be a fall of 2d. in the unit of sulphur, which would make a difference of no less than 40,000. a year to the company. It is, however, quite possible that the price of sulphur may improve before the Tharsis Company begin selling their product for next year, and it may be noted that their whole stock is already sold at the high prices for all this year. West Maria and Fortescue, 1/2 to 1. Scottish Wagon shares (all paid) done at 12 1/2.

On SATURDAY a small business was transacted. Canadian Copper Pyrites, 38s. to 39s. Colorado Terrible, 3 1/2 to 3 3/4; the lawsuit has been put off for hearing till December, but arrangements are being made to admit of mining operations on the disputed portion of the mine. Drake Walls offered at 3 1/2, but no buyers. East Caradon, 1 1/2 to 1 3/4. Flagstaff, 1 1/2 to 1 3/4. Glasgow Caradon remain at 1 1/2; this company sold on the 29th ult. 241 tons of copper ore, realising 1333. 17s. 6d., or an average of 110s. 8d. per ton. This is very satisfactory, as last month's sale of 250 tons only averaged 92s. 2d., while the sale at this time last year averaged 104s. 5d. Gunnislake (Clitters) remain at 1 1/2 to 1 3/4; this company sold on above date 164 tons of copper ore, realising 959. 2s., or an average of 110s. 7d. per ton. Huntington easier at 41s. to 43s. Lochore and Capletrae done at 5 1/2. Marke Valley firmer at 1 1/2 to 1 3/4. Omoo and Cleland done at 44s. and 45s., closing 45s. to 46s. Prince of Wales, 2s. 6d. to 3s. 6d. Richmond, 12 1/2 to 13. Tharsis done at 21 1/2 and 21 3/4, closing 21 1/2 to 21 3/4; new shares, 14 1/2 to 14 3/4. Young's Paraffin, 5 1/2 to 5 3/4. West Maria and Fortescue, 1/2 to 1; these low quotations are due in some measure to the dispute not yet settled being kept open so long. Scottish Wagon (all paid) done at 12 1/2 and 12. Yorke Peninsula ordinary remain at 1/2 to 1/2, and 15 per cent. guaranteed preference (1/2 each, all paid), 1/2 to 1; the report, with statement of accounts to Dec. 31 last, to be presented to the annual general meeting of this company on Aug. 11 next, has just been issued. Accompanying them are extracts from Capt. August's reports for the past six months. Also (1) sketch of part of South Australia, showing the position of the Kurilla Mine, the Duryea Mine, and the Bon Accord Mine, the properties of this company; (2) sketch showing the position and extent of sections on which the Kurilla and Duryea Mines are situated, and the course of the railway from Port Wallaroo to Kadina, and the branch line thence through Kurilla and Duryea to the Doora Mine; and (3) sketch showing the shafts and levels on the original lode in the Kurilla Mine on May 17 last. The report states—"The 40,000 preference shares have (with the trifling exception of 257 of them) all been issued. With the funds thus raised the directors at once proceeded to recommence operations at the Kurilla Mine, by causing an existing winze to be enlarged into a shaft, in order to reach the run of ore ground. It is expected this shaft will be completed by the end of this month to the 25, and then there will remain some fathoms more to sink before there can be attacked. The report then treats of the various discoveries, and the progress of operations at the mine generally, and says since operations were resumed at the Kurilla, in November last, 165 tons of ore has been raised. Of these 108 tons were sold in April last, averaging 12 1/2 per cent. for copper, some ranging up to 17 1/2 per cent., and realised net 651. 15s. 2d. It is expected that by the end of last month 100 tons more would be available for sale, and Capt. August sees nothing to prevent bi-monthly sales in the future. The allotments in the Aberdeen Trust have continued to sell well. The money realised from this (248. 12s. 2d.), as well as the several properties held by the way of mortgage by the trust, and the debenture holders, is about to be re-transferred to the company now that the debentures are extinguished. The directors trust that the future development of the mine will result profitably, and place the company in a position to declare dividends."

On TUESDAY the market was dull. Bedford United, 3 1/2 to 1. Benhar (all paid), 10 to 10 1/2; and new (5s. paid) shares done at 5 1/2, closing 5 to 5 3-16ths. Canadian Copper Pyrites done at 38s. 3d. to 38s. 6d. Cedar Creek, 5 1/2 to 5 3-16ths. Ebbw Vale lower, done at 16 1/2, closing 16 1/2 to 16 3/4. Flagstaff, 1 1/2 to 1 3/4. Glasgow Caradon higher at 26s. to 27s. 1/2. Gunnislake (Clitters), 1 1/2 to 1 3/4. Gold Run, 3 1/2 to 1. Huntington lower, done at 2 1/2, closing 1 1/2 to 1 3/4. Marke Valley higher at 1 1/2 to 1 3/4 buyers. Omoo and Cleland done at 2, closing 1 1/2 to 2. Pestarena United, 1 1/2 to 1 3/4. Richmond done at 12 1/2, closing 12 1/2 to 13; this week's run is announced at 455,000, which is 89000 better than last week's. Rica, 3 1/2 to 3 3/4. South Cleveland Ironworks, 2 1/2 to 3 1/4. Sweetland Creek, 2 1/2 to 3. Tharsis done from 21 1/2 to 21 3/4, closing at these prices; new shares done at 14 1/2 to 14 3/4 and 14 1/2, closing 14 1/2 to 14 3/4. West Maria and Fortescue, 1/2 to 1. Wheel Mary Hutchings, 1-16th to 1/2. Scottish Wagon (all paid) done at 12. On WEDNESDAY a small business was done. Arnisston, 6 1/2 to 6 3/4. Benhar (all paid), 10 to 10 1/2; new (5s. paid) shares, 5 to 5 3-16ths. Bolekow, Vaughan, A, done at 49 1/2. Canadian Copper Pyrites done at 37s. and 38s., closing 37s. to 38s. Glasgow Port Washington (100. paid) done at 3 1/2. Huntington opened at 32s., and improved to 34s., but afterwards were pressed for sale down to 32s. 6d., closing 1 1/2 to 1 3/4. The heavy fall is owing to a rumour that the company's works have been entirely destroyed by fire, and are not insured. Monkland 7 per cent. guaranteed preference, 6 1/2 to 6 3/4. Scottish Australian, 1 1/2 to 1 3/4; the sales of coal for May amounted to 10,044 tons. Tharsis done from 21 1/2 to 21 3/4, closing at these prices; new shares, 14 1/2 to 14 3/4. Scottish Wagon (all paid) done at 12. Yorke Peninsula, ordinary, remain at 1/2 to 1/2, and 15 per cent. guaranteed preference (1/2 each, all paid), 1/2 to 1; advices from this company's committee of inspection at Adelaide have just been received, of date June 17 last. These continue of the same favourable character, and it is expected that 100 tons of ore, out of 120 tons on the mine, will be got ready for sale.

The following are this week's prices of some stocks, shares, &c., occasionally dealt in on this market, but not quoted (with few exceptions) on any of the Scotch Stock Exchanges:—Iron, Steel, and Coal Companies: Andrew Knowles and Sons, 22 1/2; Britannia Ironworks, 10; Cardiff and Swansea Steam Coal, 3 1/2; Chapel House Colliery, 3 1/2 to 4 1/2; Great Western Colliery, 1; Leigh and Wilkes Barre 6 per cent. preference, 14 1/2 to 15; North British Colliery, 1; North British (U.S.), 89 1/2; Llynvi, Tondur, and Ogmore Coal and Iron, 26; Mwyndy Iron, 20; New Port Abercrom Colliery, 3; New Sharlston Collieries, preferred, 5 1/2; Powell's Llantwit Colliery, 2 to 3; Scottish Australian Mining, new shares, 5-16ths; South Cleveland Ironworks, 10 1/2; Ulverston Mining, 10 1/2; West Cumberland Iron and Steel, 9 1/2; Copper, Lead, Tin, &c., Companies: Almada and Tiritio, 13 1/2; Bensch Lead, 3 1/2; Bowden Hill Manganese, 3 1/2; Copiapu Mining, 3 1/2; Court Grange Lead, 3 1/2; Drake Walls, 1/2 to 1/2; Great Laxey, 1 1/2; Gunnislake (Clitters), 1 1/2; L.X.L., 3 1/2; Lady Constance, 1 1/2 to 1 3/4; New Consols, 1 1/2; New Quebrada, 4 1/2; North Hendre Lead, 3 to 4; Plynlimmon Lead, 3 1/2; South Roskear, 6; West Esgrail 1 1/2; West Maria and Fortescue, 1/2; Wheel Mary Hutchings, 1-16th; Yorke Peninsula Mining 15 per cent. guaranteed preference, 7 1/2; Yorkshire Mining, 13-16th to 1/2; Gold and Silver Companies: Australasian Mines Investment, 1/2; Battle Mountain, 2 1/2; Chontales Consolidated, 3/4; ditto new shares, 3/4; Colorado Terrible Lode, 3 1/2; Don Pedro North del Rey, 3 1/2; Eberhardt and Aurora, 8 1/2; Exchequer, 3 1/2; Frontino and Bolivia, 1 1/2; Javali, 1/2; Pestarena United, 1 1/2 to 1 3/4; Port Phillip and Colonial, 13-16th; Rica, 3 1/2 to 3 3/4; Santa Barbara (at Paris), 3 1/2; John Deere, 1; South Aurora, 7-16th; Teemua, 7 1/2; United Metals, 3 1/2; Welsh, "The" Gold, 3 1/2; Winters' Freehold, 2 to 5; Oil Companies: Flintshire Oil and Cannel, 1 to 2; Middleton, 3 1/2; West Calder, 1 1/2; Miscellaneous Companies: Aberdeen Lime, 15 1/2; Bede Metal and Chemical, 3 1/2; Conglog Slate and Slab, 10 1/2; General Sewage and Manure, 6; Langdale's Chemical Manure, 5 1/2; Lawe's Chemical, 6 to 6 1/2; Native Guano, 5 1/2; Newcastle Chemical, 1 1/2; North Cornwall Koolin, 1; Phospho-Guano A, 7; ditto B, 2; Thames Chemical, 6; and subjoined are the latest prices, &c., of those quoted on the Stock Exchanges:—

Amount of share.	Amount paid up.	Name.	Latest price.
410	10	Arnisston Coal (Limited)	6 1/2
10	10	Benhar Coal (Limited)	10 1/2
10	10	Bolckow, Vaughan, A (Limited)	5 3-16
100	10	Cairnabla Gas Coal (Limited)	8 9-10
10	10	Chillington Iron (Limited)	5 1/2
32	29	Ebbw Vale Steel, Iron, and Coal (Limited)	16 1/2
10	10	Fife Coal (Limited)	4
10	10	Glasgow Port Washington Iron and Coal (Limited)	3 1/2
10	10	Ditto All paid	3 1/2
10	10	Lochore and Capletrae (Limited)	5 1/2
10	10	Monkland Iron and Coal (Limited)	4 1/2
10	10	Ditto 7 per cent. Guaranteed Preference	6 1/2
100	100	Nant-y-Glo and Blaenau Ironworks pref. (Limited)	44 1/2
10	4	Omoo and Cleland Iron and Coal (Limited)	2
1	1	Scottish Australian Mining (Limited)	1 1/2
50	50	Shotts Iron	70
10	5	COPPER, LEAD, SULPHUR, TIN.	7 1/2
10	10	Canadian Copper Pyrites (Limited)	38s.
10	10	Ditto All paid	6 1/2
10	7	Cape Copper (Limited)	34 1/2
3	2	Dunseley Wheel Phoenix Tin (Limited)	2s.
1	1	Glasgow Caradon Copper Mining (Limited)	26s.
1	1	Ditto New	19s.
1	1	Huntington Copper and Sulphur (Limited)	32s.
25s.	25s.	Kapunda Mining (Limited)	1 1/2
4	4	Pauldillo Copper Mining (Limited)	1 1/2
10	10	Rio Tinto (Limited)	8
10	10	Russian Copper Mining (Limited)	2 1/2
10	10	Tharsis Copper and Sulphur (Limited)	21 1/2
10	7	Ditto New	14 1/2
1	1	Yorke Peninsula Mining (Limited)	3 1/2
GOLD, SILVER.			
20	20	Emma Silver Mining (Limited)	35s. 6d.
10	10	Flagstaff Silver Mining (Limited)	13 1/2
5	5	Last Chance Silver Mining (Limited)	1 1/2
5	5	Richmond Mining (Limited)	13
OIL.			
10	7	Dalmeney Oil (Limited)	111s. 6d.
10	10	Uphall Mineral Oil (Limited)	3
10	8 1/2	Young's Paraffin Light and Mineral Oil (Limited)	5 1/2
MISCELLANEOUS.			
50	25	London & Glasgow Engineering & Iron Shipbuilding	19
20	11 1/2	Peruvian Nitrate (Limited)	7
10	10	Scottish Wagon Company (Limited)	13
10	4	Ditto New	95s.

Last day for this account August 10; settling day, August 13.

NOTE.—The above list of mines and auxiliary associations is as far as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring quotation for them and such information as can be ascertained from time to time

to be inserted in this list, they will be good enough to communicate the name of the company with any other particulars as full as possible.

J. GRANT MACLEAN, Stock and Share Broker.

Post Office Buildings, Stirling, Aug. 5.

REPORT FROM LANCASHIRE AND CHESHIRE.

Aug. 5.—On Tuesday, Mr. C. E. Driffield, district coroner, held an inquest at Ince, near Wigan, touching two or three deaths caused by the explosion of a boiler at the Ince Arley Pits, belonging to the Pearson and Knowles Coal and Iron Company (Limited). The disaster took place in the workings of the colliery, and at the time caused great consternation, for it was thought that the pit had fired. Mr. Israel Knowles, general superintendent of the company's works, was one of the witnesses called, and said that at the time of the explosion the engine was standing idle, the pit having almost finished work for the day, but the extra pressure thus put on the boiler was not sufficient to account for the casualty. The thickness of iron used in constructing boilers was 3-in., but at the portion where the boiler had given way it was not more than 1-16-in., and this was due to the fact that above the boiler there was a leakage in a steam-pipe, and the water had percolated through the brickwork which surrounded the boiler, and had caused the corrosion of the plate. There were indications also of the plate had not been perfectly rolled, and this fact, combined with the leakage to which he had referred, would, in his opinion, be sufficient to account for the explosion. The boiler was supposed to have been examined daily by the engineman and the underlooker externally, and the foreman of the boilers inspected it internally as required, or as circumstances admitted. The foreman of the boilers gave evidence of his inspection on July 12, and stated his attention was not attracted to the plate, although the defect must then have been in existence. Mr. Hall, Her Majesty's Inspector of Mines for the district, agreed with the theory raised by the previous witnesses as to the cause of the explosion. The boiler he said was properly fitted with safety-valves, and, with the exception of the plate referred to, seemed to be in fair order. It would have been difficult to detect the defective plate by an inside examination, and as the surface of the boiler was covered with brickwork it was, of course, impossible to see the amount of damage that was being done by the leakage. It seemed strange the underlooker had not had the leakage remedied. Covering boilers as this had been covered, when they were not exposed to the weather, placed a difficulty in the way of their examination with very little, if any, corresponding advantage. The jury found that the deaths had resulted from the bursting of the boiler, caused by the corrosion of one of the plates, and that no blame attached to anyone connected with the pits.

There has been no change in the Coal Trade since last report. A settled period of dullness seems to have set in, and there seems no prospect of improvement. In some parts of the district there are large stocks, but for the most part these have been kept down by constant restrictions of the output.

CRENVER AND WHEAL ABRAHAM UNITED MINES COMPANY (LIMITED).

IN LIQUIDATION. THE LIQUIDATORS are PREPARED TO RECEIVE TENDERS for the PURCHASE of the ABOVE MINES, with the VALUABLE MACHINERY and PLANT, as a going concern, in One Lot. The property can be viewed and shown, on application to Capt. THOMAS, at the Mine, in the parish of Crowan, in the county of Cornwall; and particulars of the leases and inventory of the machinery and plant, with full information respecting the working and prospects of the mines may be obtained on application to W. P. CARDOSO, Esq., Camborne, Cornwall; Messrs. GOOD, DANIELS, and Co., Public Accountants, 7, Poultry, London, E.C.; or O. W. OAKES, Solicitor, 200, Piccadilly, 7, Poultry, London, 6th August, 1875.

HENDON SPELTER WORKS COMPANY. TO CAPITALISTS, PROMOTERS OF PUBLIC COMPANIES, & OTHERS.

FOR SALE, in consequence of the Death of the late Senior Partner, the SPELTER WORKS, situate at Hendon, in the borough of Sunderland, in the county of Durham, now being carried on under the style of "THE HENDON SPELTER COMPANY." The works are situated within one mile of the well-known docks of the port of Sunderland, and adjoining the Hartlepool Branch of the North Eastern Railway, with which they are connected by high and low level sidings, and thereby placed in communication with all parts of the United Kingdom. Their position, with easy distance of both the ports of Newcastle and Sunderland, is very advantageous for the cheap importation of raw material, as also the forwarding of the manufactured article either by land or sea.

The ground on which the works are built could be either bought out or sold on a yearly perpetual ground rent, and any quantity under 20 acres could be included in the sale.

Being situated in the midst of the Durham Coal Field fuel of the best description can be obtained at a cost below almost any other part of the United Kingdom. There are 19 workmen's cottages, which could be sold with the works. The works contain 24 zinc furnaces, capable of producing 70 tons of metal a week, as also calciners, potfolds, machinery, blacksmiths' and joiners' shops, &c., of sufficient capacity for a much larger number. The works could, therefore, be doubled at a comparatively small cost.

The quality of the metal made at these works is well known, and it, therefore, commands a ready sale at the highest prices. Attached to the high level sidings are large depôts for coal, ore, &c. The goodwill would, of course, go with the works, and they will be sold subject to all stock being taken at a fair market value.

The purchaser can also have the option of buying the CALCINING WORKS and VALUABLE MINES in SPAIN, thus allowing of the economical and regular supply of the raw material, and saving the mineowners' and merchants' profits.

As the ore from the South of Spain generally comes as ballast for ships laden with exports, it has been brought for this company at an average cost of 1s. per ton, sometimes as low as 4s. 6d.

Further particulars can be had on application to the company.

TO CAPITALISTS OR PROMOTERS DESIRING TO MAKE MONEY.

TO BE SOLD, a COLLIERY ROYALTY IN NORTH WALES, close to rail or shipping port; several shafts partially sunk; coal fully proved of FOUR SEAMS of good HOUSE and STEAM COALS, in an area of upwards of 400 acres of surface. It adjoins the West Mostyn Coal Field, just successfully launched, where under seams (including Cannel) have been proved in addition to the above; so that eminent engineers state that the available coal in this royalty may be 88 feet thick. Present holder will arrange to sell the entire to an individual or company for what it has cost him, dividing all profit made above, which, even in a normal state of the coal trade, must be large. Certain and safe surveys by eminent Staffordshire and Welsh engineers have already been made.

Address, "Nil Desperandum," care of Mr. Watson, 15, Fenwick-street, Liverpool.

TO CAPITALISTS.

VALUABLE FREEHOLD LIMESTONE QUARRIES, PENWYLL, NEAR NEATH, BRECONSHIRE. ABOUT EIGHTY ACRES of enclosed FREEHOLD LAND, with the very VALUABLE QUARRIES of LIMESTONE, and the DWELLING-HOUSE, COTTAGES, OUTBUILDINGS, SMITHY, and WAREHOUSE thereon, will be OFFERED FOR SALE, BY PUBLIC AUCTION, BY MR. JAMES HALL, by direction of the Mortgagees, on Tuesday, the 17th day of August, 1875, at 2 30 P.M., at the Castle Hotel, Neath. The land is intersected by the Neath and Brecon Railway, and the Penwyl Station of that railway is situate in the midst of the property. The Penwyl limestone is reputed to be about the best in the county. Two quarries have been opened on the property, and a siding leading thence to the railway partially made. May be viewed by permission of the tenants. Particulars and conditions of sale and plans may be had after 29th July, of Messrs. BURTON, YEATES, and HART, 37, Lincoln's Inn Fields, London; of Mr. MORRIS EVANS, Penwyl; and of the auctioneer, Mr. JAMES HALL, Cae Prior, Brecon.

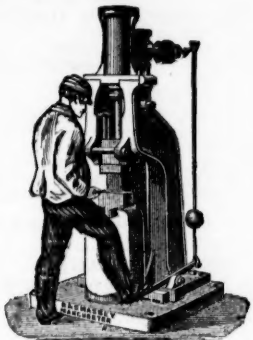
FOR SALE, TWO GOING MINES, &c., VALUABLE MINERAL LEASES OF ESTATES, near Oughterard, in the county of Galway, by PRIVATE BARGAIN, together with STEAM ENGINE, WATER WHEEL, PLANT, and WHOLE MACHINERY, in complete working order.

Within the past few months several tons of excellent lead and copper ore have been raised in the immediate vicinity of one of the shafts, and several hundreds of tons have been taken from the other shaft. Capt. FLOYD, Wellfield, Oughterard, will show the ground, and give explanations as to the nature and extent of past operations. All other particulars will be furnished by, and offers may be lodged with, the subscriber, on or before the 24th day of August next. JOHN BAINSFATHERS, Hamilton,

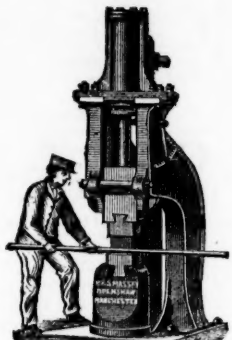
B. & S. MASSEY, OPENSHAW, MANCHESTER.

PRIZE MEDALS AWARDED:—Paris, 1867 Havre, 1868 Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873.

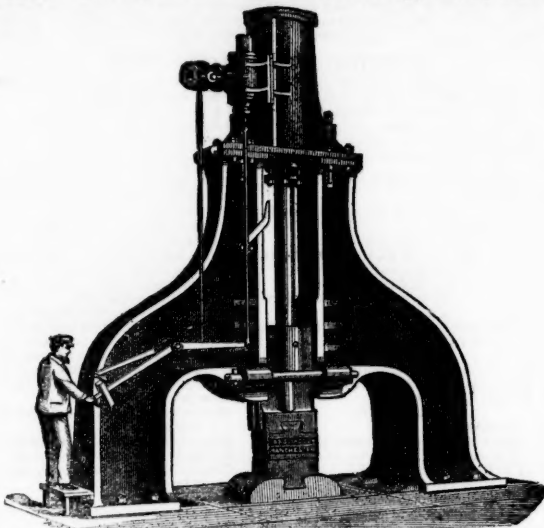
Patentees and Makers of Double and Single-acting STEAM HAMMERS of all sizes, from $\frac{1}{2}$ cwt. to 20 tons, with self-acting or hand motions, in either case giving a perfectly DEAD BLOW, while the former may be worked by hand when desired. Large Hammers, with Improved Framing, in Cast or Wrought Iron. Small Hammers, working up to 500 blows per minute, in some cases being worked by the Foot of the Smith, and not requiring any separate Driver.



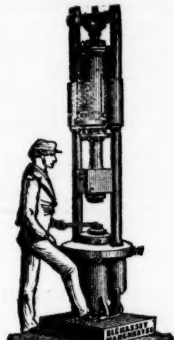
Small Hammer with Foot Motion.



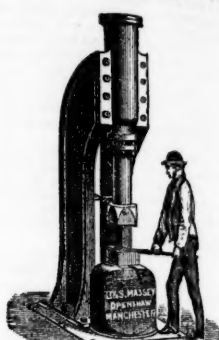
General Smithy Hammer.



Steam Hammer for Heavy Forging.



Special Steam Stamp.



General Smithy Hammer.

From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

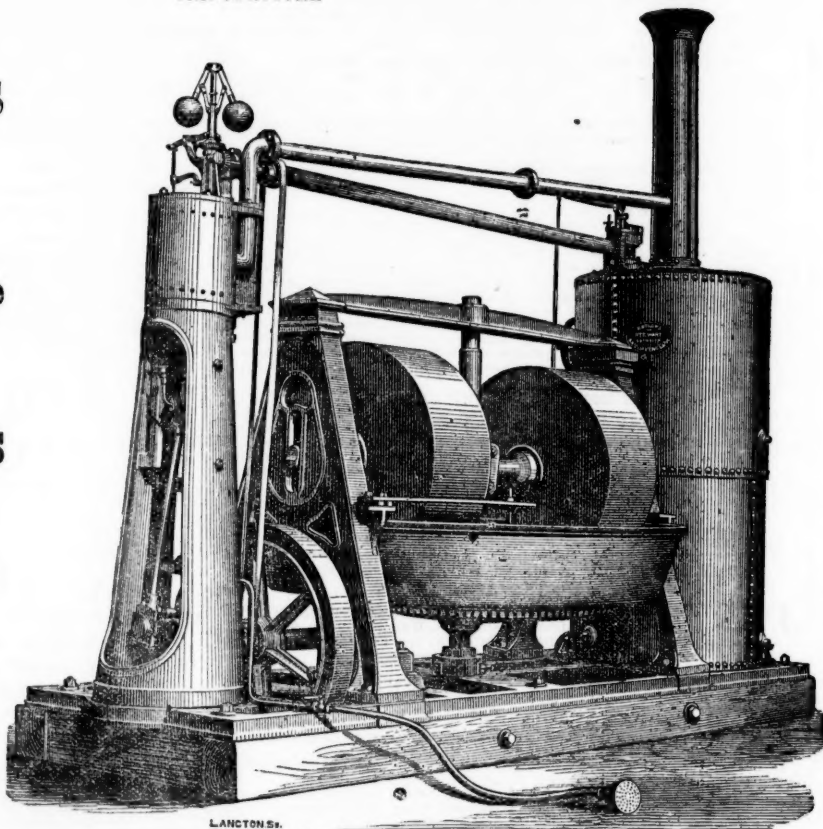
SPECIAL STEAM STAMPS, of great importance for Forging, Stamping, Punching, Bolt-making, Bending, &c. STEAM HAMMERS for Engineers, Machinists, Shipbuilders, Steel Tilters, Millwrights, Copper-smiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers, Locomotive and other Wheel Makers, &c.; also for Use in Repairing Smithies of Mills and Works of all kinds; for straightening Bars, bending Cranks, breaking Pig-iron, &c.

BARROWS & STEWART, ENGINEERS, BANBURY, MANUFACTURE

PORTABLE
Steam Engines

With Gear for
Winding,
Pumping, and Ore
Crushing.

ALSO,
COMBINED MILLS
and ENGINES,
with or without
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for Grinding
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Mortar, &c.



LANCONE'S.

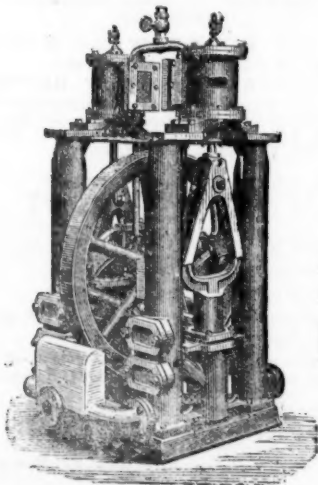
VARLEY & YEADON, COLLIERY & BRICK-MAKING ENGINEERS,

Manufacturers of WINDING, HAULING, and PUMPING ENGINES, Boilers and Fittings, Steam Piping, Donkey Pumps, Lift Pumps, Perforated Clay and Mortar Mills, Brick Presses, Pug Mills, Round and Flat Rope, Pit-head Pulleys, Wrought-iron Head Gear, ROOFS and GIRDERS, KIBBLES, ONE, TWO, and THREE-DECK CAGES, COAL TIPPING and SCREENING APPARATUS, VENTILATING FANS, TUBBING, GIRDERS, PILLARS, POINT PLATES. Steam or other Cranes, Crabs and Windlasses, Machines for Cutting Stone, &c.

CROWN POINT FOUNDRY, LEEDS.

Estimates furnished on application.

IMPORTANT TO COLLIERY OWNERS. PATENT STEAM PUMPS,



Awarded the only
Prize Medal for
Vertical Steam Pumps
at the Pomona Show,
Manchester, Nov., 1874.
FOR FORCING
WATER OUT OF MINES,
FEEDING BOILERS, AND
ALL PUMPING PURPOSES.
Prices and testimonials on application to

HULME & LUND,
PATENTEEES,

WILBURN IRONWORKS,
Wilburn-street, Regent-road,
SALFORD, MANCHESTER

HIGGINSON'S PATENT GOVERNORS FOR MARINE & LAND ENGINES

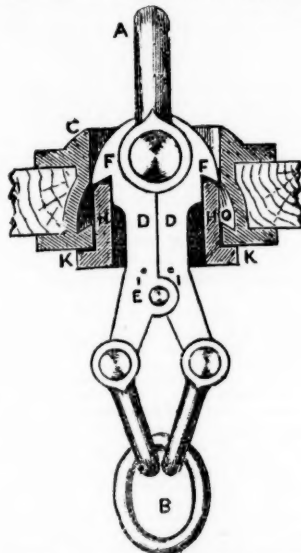
ARE THE
CHEAPEST, SIMPLEST, MOST EASILY APPLIED,
MOST SENSITIVE, MOST POWERFUL, OCCUPY LEAST SPACE,
ARE MOST EFFECTIVE IN ALL EMERGENCIES
At sea or on shore, and are the
ONLY ONES WHICH GIVE THE FULL PRESSURE
In the boiler to the piston at the top and bottom of the stroke automatically cutting off the steam according to the requirements of the work, thereby effecting an
IMPORTANT SAVING OF FUEL,
And, in case of a break-down,
INSTANTLY SHUT THE STEAM COMPLETELY OFF
Thus preventing further damage.

For Prices, Licences to Manufacture, and other particulars, apply to—

ANDREW LEIGHTON & CO.,

6, SOUTH CASTLE STREET, LIVERPOOL.

OVERWINDING IMPOSSIBLE. WALKER'S DETACHING HOOK, FOR COLLIERIES AND BLAST-FURNACE HOISTS,

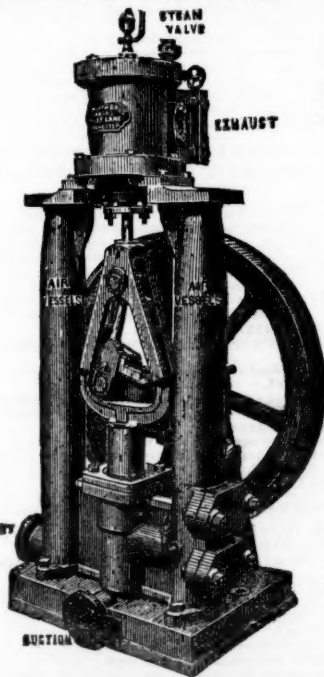


SIX LIVES SAVED.

Walker's Hook, at Tockett's sinking, has saved six men's lives. On the 6th instant, the kibble was overwound, and but for the hook would have fallen down the pit, where six men were working, 120 ft. below, all of whom would probably have been killed. Thanks, however, to Mr. Walker's invention, the rope alone passed harmlessly over, the kibble remained suspended, and in half-an-hour everything was working as if nothing had occurred.—From the Northern Echo August 20, 1874.

Full particulars may be obtained from the Manufacturers,—
THOMAS WALKER AND SON,
58, OXFORD STREET, BIRMINGHAM

ASHWORTH'S IMPROVED STEAM RAM PUMPS.



AWARDED
First Prize
MEDALS

AT
MIDDLETON,
WORSLEY,
OLDHAM,

AND
MANCHESTER AND
LIVERPOOL SHOWS
September, 1874.

For Neatness,
Simplicity,
and Efficiency.

Useful to Mill-owners,
Colliery Proprietors,
Chemical Works,
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Single & Double
RAM PUMPS
of all sizes.

Full particulars on
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ASHLEY LANE MANCHESTER.

MINING PROSPECTUSES AND ANNOUNCEMENTS OF
PUBLIC COMPANIES should be inserted in the BARNSTABLE TIMES,
published every Tuesday, and in the DEVON POST, published every Saturday,
these papers circulate largely throughout Devon and Cornwall, where many thousands of investors reside. Legal and Public Companies' advertisements, 6d. a line each insertion; Trade and Auctions, 4d. a line; Wasteful, &c., 20 words, 1s. Published by J. B. JOYCE, Bousport-street, Barnstaple, Devon to whom all orders by post or telegraph should be sent.

DYNAMITE

FOR BLASTING PURPOSES, can now be supplied in packages, containing 50 lbs. each, for export to any part of the World.

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WITHOUT THE USE OF GUNPOWDER.

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- 2 " - THE ROCK & COAL PERFORATOR, for drilling.
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The use of these Machines, while doing away with the greatest source of danger, economises at least Fifty per cent. of the labour required in Getting Coal.

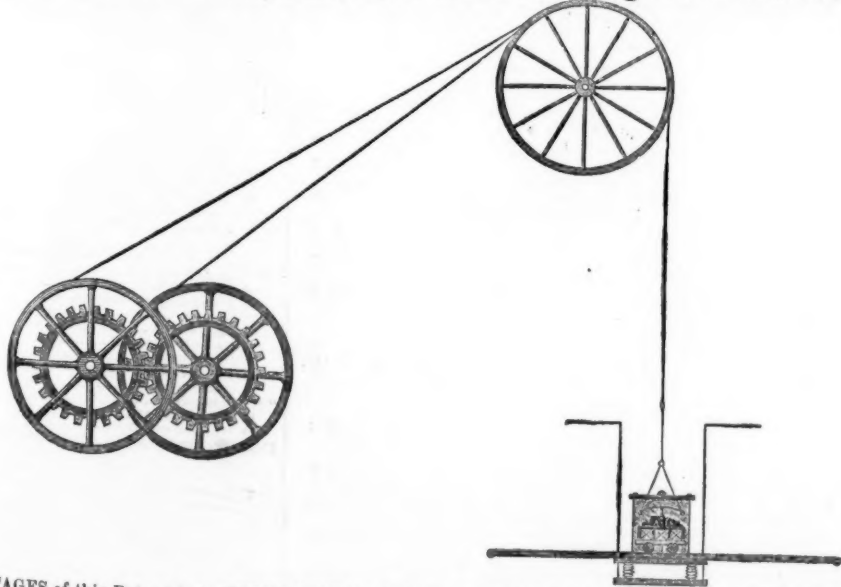
Particulars on application to—

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- 4.—The ore is made clean at one operation, and 5 per cent. of ore otherwise lost is saved.

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EXTRACTS FROM TESTIMONIALS RECEIVED:—

Mr. C. E. BAINBRIDGE, of the London Company's Mines, Middleton-in-Teesdale, by Darlington, writing on the 27th September, 1875, says:—"After a full season's experience of the very complete Dressing Machine erected by you at our Colberry Mines, we are fully satisfied with our decision to adopt your patents in preference to all others. The machinery does its work as well as we can desire, and better than we anticipated. We are now getting through 70 tons of ore stuff per day, of rich quality. Without your machinery we should have been at a stand still, for we cannot get hands to supply our wants elsewhere. It saves fully one-half of the old wages, and vastly more on the wages we now give, and the saving in ore is not much short of 10 per cent. You can quote from this letter as you think proper."

Mr. COULTAS DODSWORTH, of Haydon Bridge, writes, on the 15th January, 1874:—"I have just returned from the Stonecroft and Greyside Mines, where I have seen your 'Patent Ore Dressing Machinery' at work, with which I must say, I was highly pleased. It is decidedly the best machinery I have ever seen for the purpose, the results being as near perfection as possible, and I am quite sure its use in this case will be a very great saving to the company. No large mining establishment should be without your machinery, especially when labour is difficult to procure—a mere fraction of the hands being only required as against the old system, and the work altogether much better done, and a great saving of ore effected. I have heard it said that your machinery is better adapted for poor than for rich ores, but from what I have seen to-day I am quite confident it will do for any kind of ores. I beg not only to congratulate, but also to compliment, you on the great success of your 'Patent Ore Dressing Machinery.' You may use this letter as you think proper."

Mr. MONTAGUE BEALE, Managing Director of the Cagliari Mining Company (Limited), says, on May 15th, 1875:—"I have much pleasure in speaking of the great efficiency of your 'Patent Dressing Machinery,' as erected by you at our mines at Rosas, in the Island of Sardinia. You will remember it has always been considered impossible to dress, or rather separate, the minerals our ores contain by machinery, but our captain assures me he gets a constant return of 76 per cent. of lead with the greatest ease, and I know by the returns we are realising the best market price. I consider this company is much indebted to you for the success you have achieved at so small cost. It may interest you to know, from my experience in several of the British possessions, including the whole of the Australian Colonies, that my opinion is I have never seen any dressing machinery that can efficiently, and at so small a cost, dress, and separate metallic ores, however close the mechanical mixture may be, as yours. You can use this letter in any way you like."

The most satisfactory testimonials also have been received from the GREENSIDE MINE COMPANY, Westmoreland: the TALARGOCH MINING COMPANY, North Wales, and others. Copies of these may be had from Mr. GREEN.

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A. JEFFERY

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(ESTABLISHED 1764.)

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.									
Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid		
15.0	Alderley Edge, c, Cheshire	10 00	—	—	12 6 8	0 5 0	Jan. 1875		
50.00	Bamford, c, i, m, Devon	1 00	—	—	0 2 0	0 2 0	June 1873		
4500	Elan Caelan, s, i, Cardigan* (24 sh.)	3 10 0	—	—	0 10 9	—	—		
200	Botalack, t, c, St. Just	118 5 0	45	40 45	619 15 0	5 0 0	Aug. 1872		
10000	Bronckford, s, i, Cardigan	1 7 6	—	—	2 2 0	0 6 0	Jan. 1872		
4000	Brockwood, c, Buckfastleigh	1 16 0	—	—	3 10 0	0 6 0	July 1875		
3348	Cargill, s, i, Newlyn	6 10 0	—	—	4 16 3	0 12 6	Oct. 1872		
6400	Cashwell, i, Cumberland	2 10 0	—	—	1 6 0	0 2 0	Aug. 1873		
1400	Carn Brea, c, i, Illogan	35 0 0	—	—	308 0 0	1 0 0	Feb. 1874		
4000	Cath. & Jane, s, i, Penryn	5 0 0	—	—	0 7 6	0 7 6	June 1873		
2450	Cock's Kitchen, t, Illogan	20 19 9	—	—	11 17 0	0 7 6	June 1873		
10240	Devon Gt. Consols, c, Tavistock	1 0 0	—	—	116 10 0	0 12 0	May 1872		
4296	Delcoath, c, i, Camborne	10 14 10	40	39 41	106 18 0	0 10 0	June 1875		
6000	Drake Walls, t, c, Calstock	6 0 0	—	—	0 2 0	0 2 0	July 1874		
10000	East Baleswiden, t, Sancreed	1 0 0	—	—	0 2 11 0	0 5 0	Feb. 1874		
6144	East Caradon, c, St. Cleer	2 14 6	—	—	14 19 0	0 1 0	Oct. 1872		
800	East Darren, i, Cardigan	32 0 0	—	—	259 10 0	1 0 0	July 1875		
6400	East Pool, t, c, Illogan	0 9 9	—	—	13 13 9	0 2 6	July 1875		
1906	East Wheel Lovell, t, Wendron	5 19 0	8	6 7	20 7 6	0 7 6	Oct. 1874		
2800	Foxdale, i, Isle of Man	25 0 0	—	—	80 15 0	0 10 0	Sept. 1872		
49000	Glasgow Carr, c, (30,000 £ p, 10,000 15s. p.)	1 13 6	1 13 6	1 13 6	8 7 4	0 1 6	Jan. 1875		
15000	Great Laxey, i, Isle of Man	4 0 0	—	—	18 3 0	0 8 0	July 1875		
25000	Great West Van, i, Cardigan	2 0 0	—	—	0 2 0	0 2 0	Aug. 1874		
4808	Great Wheel Vor, t, c, Helston	40 15 0	—	—	15 19 6	0 2 6	June 1872		
6400	Green Hurth, i, Durham	0 6 0	—	—	1 12 0	0 4 0	Oct. 1874		
20000	Grogwinion, i, Cardigan	2 0 0	—	—	0 2 0	0 2 0	Dec. 1874		
9830	Gunnislake (Clitters), t, c	6 5 0	—	—	0 7 3	0 1 6	June 1875		
1024	Herodfoot, i, near Liskeard	8 10 0	—	—	62 5 0	0 15 0	Oct. 1872		
18000	Hington Down, c, Calstock	2 5 0	—	—	4 3 0	0 5 0	Dec. 1872		
25000	Killalee, s, i, Tipperary	1 0 0	—	—	0 8 11 6	0 8 0	Mar. 1875		
400	Lisbarn, c, Cardigan	18 15 0	—	—	567 10 0	1 0 0	July 1875		
5120	Lovell, t, Wendron	0 10 0	—	—	0 17 6	0 1 6	Jan. 1874		
1000	Melindur Valley, i, Cardigan	3 0 0	—	—	0 7 2	0 7 2	Jan. 1875		
9000	Miners Mining Co., i, Wrexham	5 0 0	—	—	63 19 2	0 2 0	May 1875		
20000	Mining Co. of Ireland, c, c, i	7 0 0	—	—	0 8 0	0 8 0	July 1872		
12000	North Hendre, i, Wales	2 10 0	—	—	1 0 0	0 2 0	Apr. 1875		
2000	North Levant, t, c, St. Just	12 2 0	—	—	4 13 0	0 12 0	Sept. 1873		
27858	Old Treburget, s, i, ordinary shares	1 0 0	—	—	0 9 0	0 9 0	Feb. 1874		
9258	Old Treburget, s, i, (10 per cent. pref.)	0 10 0	—	—	0 1 4 6	0 5 0	July 1874		
9580	Pedn-an-dren, t, Redruth	9 17 0	—	—	0 5 0	0 5 0	Nov. 1871		
5000	Penhall, t, St. Agnes	3 0 0	—	—	3 13 6	0 2 0	July 1875		
2800	Penrith, t, c, Gwennap	2 0 0	—	—	0 2 0	0 2 0	Nov. 1874		
6000	Phoenix, t, c, Linkinhorne	4 13 4	—	—	39 19 0	0 4 0	Nov. 1872		
1772	Polterro, t, St. Agnes	15 0 0	—	—	1 12 6	0 5 0	Mar. 1872		
18000	Prince Patrick, s, i, Holywell	1 0 0	—	—	0 11 6	0 2 6	July 1875		
1120	Providence, t, Lelant	16 17 6	—	—	104 12 6	0 10 0	Sept. 1872		
2000	Queens, s, i, Holywell	2 0 0	—	—	0 2 0	0 2 0	Sept. 1872		
12400	Roman Gravel, i, Salop	7 10 0	—	—	4 19 0	0 8 0	May 1875		
10000	Shelton, c, i, St. Agnes	1 0 0	—	—	0 2 0	0 2 0	Oct. 1872		
612	South Caradon, c, St. Cleer	9 17 0	—	—	720 0 0	1 0 0	June 1875		
5000	South Carn Brea, c, i, Illogan	2 6 6	—	—	0 10 0	0 2 6	July 1872		
6123	South Condurrow, c, Camborne	6 6 6	—	—	1 7 6	0 5 0	July 1875		
6000	South Darren, i, Cardigan	3 6 6	—	—	1 1 6	0 1 6	Nov. 1870		
10000	St. Pr. Patrick, s, i, (6000 sh. issued)	1 0 0	—	—	0 6 0	0 2 0	Apr. 1875		
8771	St. Pr. Amalgamated, t, c	3 10 0	—	—	0 9 0	0 4 0	Nov. 1871		
12000	Tankerville, i, Salop	6 0 0	—	—	3 18 0	0 5 0	Aug. 1875		
6000	Tinroft, c, i, Pool, Illogan	9 0 0	—	—	48 3 6	0 5 0	May 1875		
16000	Tretoll, s, i, Bodmin	2 0 0	—	—	0 1 0	0 1 0	Mar. 1874		
4000	Trumpet Consols, c, Helston	7 10 0	—	—	9 11 0	0 10 0	Nov. 1872		
15000	Van, i, Llanidloes	4 5 0	—	—	15 4 6	0 13 0	July 1875		
8600	W. Chilverton, i, Perranzabuloe	12 10 0	—	—	62 0 0	0 5 0	June 1874		
612	West Wheel Vor, t, c, Helston	95 10 0	—	—	0 2 0	0 2 0	Oct. 1875		
2048	West Wheel Vor, t, c, Helston	5 2 6	—	—	3 12 6	0 5 0	Oct. 1875		
612	Wheel Basset, c, Illogan	5 2 6	—	—	638 10 0	1 10 0	Aug. 1875		
2048	Wheel Jane, t, Kea	2 13 10	—	—	11 5 0	0 5 0	Dec. 1875		
4296	Wheel Margaret, t, Uly Lelant	5 4 6	—	—	11 19 6	0 5 0	Dec. 1874		
800	Wheel Ower, t, St. Just	15 17 6	—	—	62 2 8	0 10 0	May 1872		
6000	Wheel Russell, t, Redruth	86 5 0	120	100 120	62 2 8	0 10 0	Aug. 1872		
12000	Wheel Russell, t, Redruth	2 0 0	—	—	0 1 0	0 1 0	Dec. 1874		
10000	Wheel Wharfedale, t, c, Wetherham	1 0 0	—	—	0 3 8	0 3 8	Nov. 1874		
25000	Wicklow, c, s, i, Wicklow	1 0 0	—	—	62 9 0	0 2 6	May 1872		
10000	Wye Valley, i, Montgomery	3 0 0	—	—	0 3 0	0 3 0	Mar. 1873		

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid		
85500	Almaden, i, Spain	2 0 0	—	—	1 7 9	0 2 0	Mar. 1875		
30000	Almaden, i, Spain	1 0 0	—	—	0 5 3	0 10 0	Mar. 1875		
20000	Australian, c, South Australia	7 7 6	—	—	0 15 6	0 2 0	July 1875		
10000	Battle Mountain, s, c, (2500 part pd.)	5 0 0	—	—	0 10 0	0 10 0	Nov. 1872		
15000	Birdsey Creek, c, California	4 0 0	—	—	0 14 0	0 2 6	June 1874		
6000	Bunsberg, i, Germany	10 0 0	—	—	0 17 4	0 8 0	July 1873		
12520	Burra Burra, c, s, Australia	5 0 0	—	—	56 0 0	0 10 0	Oct. 1872		
30000	Cape Copper, c, s, Africa	7 0 0	—	—	0 5 0	0 5 0	June 1875		
40000	Cedar Creek, c, California	7 0 0	—	—	0 5 0	0 5 0	June 1873		
80000	Central American Association	0 16 6	—	—	0 6 0	0 1 0	July 1875		
15000	Chicago, s, Utah	10 0 0	—	—	1 12 0	0 4 0	May 1875		
21000	Colorado Terrible, s, Colorado	5 0 0	—	—	0 13 6	0 4 0	Jan. 1875		
100000	Don Pedro del Rey	0 16 0	—	—	2 5 9	0 2 0	Mar. 1872		
25000	Eberhardt and Aurora, s, Nevada	10 0 0	—	—	1 0 0	0 1 0	July 1871		
2352	Eldorado, c, Nova Scotia	10 0 0	—	—	2 5 0	0 15 0	June 1873		
60000	Emma, s, i, Australia	20 0 0	—	—	3 12 0	0 6 0	Dec. 1872		
10000	English and Australian, c, s, Aust.	2 10 0	—	—	2 10 0	0 2 0	Mar. 1875		
15000	Ferguson, c, California	2 0 0	—	—	0 3 0	0 3 0	Apr. 1872		
30000	Flagstaff, s, Spain	10 0 0	—	—	4 2 0	0 5 0	July 1873		
25000	Fortuna, s, Spain	2 0 0	—	—	4 14 4	0 7 8	Mar. 1875		
80000	Gold Run, s, i	1 0 0	—	—	0 2 0	0 2 0	Oct. 1872		
80000	Kapunda Mining Co. Australia	1 30 0	—	—	0 2 0	0 2 0	Oct. 1873		
20000	Last Chance, s, i, Utah	5 0 0	—	—	0 14 0	0 2 0	July 1875		
15000	Linares, i, Spain	3 0 0	—	—	14 19 2	0 5 0	Mar. 1875		
65000	London and California, s, i	2 0 0	—	—	0 1 0	0 1 0	July 1875		
7837	Lusitania, Portugal, i, (25 shares)	3 10 0	—	—	1 11 6	0 1 6	Mar. 1873		
15000	Mammoth Copperopolis of Utah, c, i	10 0 0	—	—	0 5 0	0 5 0	Dec. 1872		
6000	Mammoth Copperopolis of Utah, c, i	10 0 0	—	—	0 4 0	0 4 0	Jan. 1873		
18000	Prussian Mining & Ironworks, c, i	30 0 0	—	—	0 9 0	0 3 0	June 1873		
100000	Pontgibaud, s, i, France	20 0 0	—	—	19 11 0	0 11 0	June 1875		
100000	Port Phillip, c, i, France	2 0 0	—	—	1 8 0	0 1 0	Jan. 1872		
54000	Richmond Consols, s, Nevada	5 0 0	—	—	2 14 0	0 7 8	May 1875		
120000	Scottish Australian Mining Co. t	1 0 0	—	—	12 12 0	0 12 0	May 1875		
112500	Sierra Buttes, c, California	2 0 0	—	—	1 14 0	0 2 0	July 1875		
60000	South Aurora, s, Nevada	5 0 0	—	—	0 14 2	0 2 0	Nov. 1873		
225000	St. John del Rey (25 stock and multiples dealt in)	385 405	—	—	20 p. et. for 1/2 year.	—	June 1875		
10000	Sweetland Creek, s, i, California	4 0 0	—	—	3 0 0	0 2 0	Dec. 1874		
20000	Tollins, s, i, (6000 sh. are £1 pd.)	4 10 0	—	—	0 11 6	0 6 6	May 1874		
15000	Western Andes, s, i, (New Granada)	5 0 0	—	—	1 19 4	0 6 0	Apr. 1875		

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
20000	Anglo-Australian, c, Victoria*	2 10 0	—	—	Sept. 1872
3000	Bellavista, s, Peru* (£10 shares)	10 0 0	—	—	Fully pd.
50000	Blue Tent, <i>hyd.</i> , California	5 0 0	5 1/4	4 3/4 5 1/4	Fully pd.
50000	Braganza, c, Brazil†	0 15 0	—	—	Oct. 1872
12000	Camp Floyd, s, Utah*	10 0 0	—	—	Fully pd.
35000	Cesena Sulphur Company, Romanga, Italy*	10 0 0	—	—	Fully pd.
50152	Chontales, c, s, Nicaragua† (and 12,542 of £1 15s.)	2 0 0	3 1/2	3 1/4	Fully pd.
6000	Clifton, s, Colorado	5 0 0	—	—	Feb. 1872
10000	Crescent, c, Plumas County, California*	10 0 0	—	—	Fully pd.
100000	Culaba, c, Minas Geraes, Brazil*	0 17 6	—	—	June 1872
10000	Douglas, s, Georgetown, Col.	5 0 0	—	—	Fully pd.
35000	Excelsior Hydraulic Gold Washing Co., California*	5 0 0	—	—	Dec. 1871
60000	Exchequer, c, s, California*	1 0 0	—	—	Fully pd.
50000	Frontino and Bolivia, c, New Granada†	2 0 0	1	1 1 1/4	Fully pd.
50000	General Brazilian, c*	1 0 0	—	—	Fully pd.
10000	Goetzl Tunnel Co., Georgetown, Col.	7 0 0	—	—	Fully pd.
40000	Holcombe Valley, c, s, California	1 0 0	3 1/2	3 1/4	July 1873
6000	Hornachos, * s, i, (£10 shares) Spain	10 0 0	—	—	Jan. 1874
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—	—	Fully pd.
20000	Independence, c, California*	5 0 0	3	2 3/4 2 3/4	Fully pd.
20000	I. X. L., c, s, California*	5 0 0	—	—	Fully pd.
50000	Javali, c, Nicaragua*	2 0 0	3 1/2	3 1/4	Fully pd.
12000	Lanestosa, * i, s, Viscaya, Spain (£2 shares)	1 12 6	—	—	Sept. 1874
75000	Malabar, c, Colombia* (68000 issued)	1 0 0	3 1/2	3 1/4	Fully pd.
4000	Malaga, i, Spain*	10 0 0	—	—	Fully pd.
40000	Malpaso, c, Colombia* (10000 pref. shares, fully paid)	1 0 0	3 1/2	3 1/4	Fully pd.
2000	Menzenberg, c, Honnef, Germany*	5 5 0	—	—	Fully pd.
6000	Monte Loreto, c, s, Italy*	5 0 0	—	—	Fully pd.
15000	New Pacific, c, s, Nevada*	0 10 0	3 1/2	3 1/4 3 1/4	Dec. 1874
60000	New Granada, c, Venezuela*	5 0 0	4 1/2	4 1/4	Fully pd.
10000	New Rosario, c, Mexico*	1 0 0	3 1/2	3 1/4	Fully pd.
20000	New Zealand Kapanga, c, Coromandel*	5 0 0	2 1/2	3 1/4 1 1/4	Fully pd.
10000	Norfolkland, * i	10 0 0	—	—	Fully pd.
20000	North American, c*	10 0 0	—	—	Fully pd.
50000	Pastorello, c, Chili† (280000 debentures)	4 0 0	1 1/2	1 1 1/2	Fully pd.
80000	Pastorena United, c, Italy†	3 0 0	—	—	Fully pd.
50000	Rica, c, Colombia* (40000 issued)	1 0 0	3 1/2	3 1/4	Fully pd.
10000	Rio Tinto, * c, Huelva, Spain	10 0 0	8 1/2	7 5	Fully pd.
32500	Ruby Consolidated, c, Brazil† (£1 shares)	0 19 0	—	—	July 1872
20000	Russia, c, Orenburg and Uta†	10 0 0	3	2 1/2 3	Fully pd.
25000	San Pedro, c, Chili*	10 0 0	3	2 1/2 3	Fully pd.
40000	Santa Barbara, * c, Brazil*	2 0 0	1 3/4	1 1/4 1 3/4	Fully pd.
10000	silver Plume, s, Colorado*	0 9 6	3 1/2	3 1/4	Mar. 1872
7500	Snowdrift, s, Colorado*	1 0 0	—	—	Fully pd.
25000	St. Lawrence, c, California	5 0 0	—	—	Fully pd.
20000	Tecoma, s, Utah*	10 0 0	3 1/2	3 1/4 3 1/4	Fully pd.
20000	Thornhill Reef, c, Australia*	1 0 0	—	—	Fully pd.
4317	United Mexican, s, Mexico†	28 12 8	2 1/2	2 1/4 3	May 1875
14000	Utah, c, s, Utah*	5 0 0	3 1/2	3 1/4	Fully pd.
25000	Victoria (London)* c, s, Australia (25,000 sh. 16s. pd.)	1 0 0	3 1/2	3 1/4	Fully pd.
75000	York Peninsula, c, South Australia	1 0 0	3 1/2	3 1/4	Fully pd.
40000	Yorke Peninsula, c, South Australia Preference	1 0 0	1	3/4 1	Fully pd.